Outer Hebrides Biological Recording

Biological Recording in 2025

Discovering our Natural Heritage

Outer Hebrides Biological Recording

Discovering our Natural Heritage Biological Recording in 2025

Christine Johnson

This publication should be cited as:
Johnson, Christine. Discovering our Natural Heritage - Biological Recording in 2025. Outer Hebrides Biological Recording, 2026

ISSN: 2632-3060

OHBR are grateful for the continued support of NatureScot

NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

Cover photograph: Goose Barnacles © Joceline Hildrey

Acknowledgements

I would like to thank the recording community for their continued supports and colleagues in other recording groups and individual specialists who help us confirm the identification of difficult species.

The contribution of everyone who has helped with the production of this report and the generosity of those who have contributed photographs is appreciated. The sections on fungi, bryophytes and flowering plants were contributed by Paul Smith, the BSBI county recorder. I would like to express my appreciation for his support and contribution to recording the islands' flora and fungi over many year.

Contents

Foreword

Each year brings a new set of challenges, but there are always interesting and unexpected discoveries to compensate for the periods of bad weather, cancelled ferries or falling in a peat bog (again). I am still surprised by the number of new species which we add to our biodiversity lists and I am always delighted by the generosity of the community in devoting time to participate in our activities.

We can measure our success in meeting our objectives of increasing our biodiversity knowledge and making this information available to everyone in terms of pure numbers. We currently have 98,787 records of 4,286 taxa on the NBN Atlas, and since we started copies of our records have been down-loaded 5.34 million times. This does not included all the plant records we share with the Botanical Society of Britain and Ireland and the British Bryophyte Society. There are more statistics we can quote about the number of species which we have added to the species lists for Britain, Scotland and our own Outer Hebrides vice county, or the number of species per 10km grid square. The statistics are important as they provide the data required for evidence based decisions required to manage our natural environment, landscapes and wildlife and to monitor biodiversity loss and the effects of climate change.

I have always maintained that there is more to OHBR than just collecting data, biological recording is also about people and communities. We are informed that engaging with nature is good for our physical and mental health, and by encouraging everyone to take an interest in the natural world and providing opportunities to participate in biological recording, we aim to add extra value to this activity. We value every single record we receive, whether it is from a visiting specialist, our local experienced recorders or an observation of something interesting made whilst walking the dog.

It is now over 16 years since a group of local naturalists decided that as Comhairle nan Eilean Siar were disinclined to establish a Local Environmental Records Centre, we would take the initiative and form a biological recording group. I do not think we appreciated the scale of the endeavour, but along the way we have all become more knowledgeable and improved our natural history skills. Over the years we have formed long-standing friendships, shared adventures and grown older. It is now time for us to pass on the task of taking OHBR into the future to the next generation.

For many of us natural history is a life-long passion, and although we may no longer take an active role in organising the activities of OHBR, we will still be recording and sharing our knowledge. I wish the new OHBR team every success and I hope that you will support them. Finally, I would like to express my appreciation of your contribution in making OHBR a success and for making the last 16 years, interesting, challenging and most of all enjoyable.

Christine Johnson
March 2026

There are some days when the weather wins.
Photograph © Christine Johnson.

Resources

Information about biological recording, how to submit records and participate in surveys is available on the OHBR website. There are copies of our Wildlife of the Outer Hebrides leaflets, species checklists and previous issues of Working Together - Discovering Our Natural Heritage, Biological Recording in the Outer Hebrides to download and a list of on-line resources to help with species identification.

You can share your observations and also ask for help with identification on the OHBR and Curracag Facebook group pages.

All the OHBR records are available on-line on the NBN Atlas Scotland and are available to browse or download. Botanical records are part of the OHBR database and are shared with the Botanical Society of Britain and Ireland on the NBN Atlas and on the BSBI on-line Floral Atlas.

Links

OHBR hub of wildlife websites - https://www.hebridensis.org/
OHBR Website - https://www.ohbr.org.uk
OHBR Publications - https://www.ohbr.org.uk/publications.php
OHBR Resources - https://www.ohbr.org.uk/identification.php
Outer Hebrides Algae - https://www.outerhebridesalgae.uk/
Outer Hebrides Fungi - https://www.outerhebridesfungi.co.uk/
Outer Hebrides Lepidoptera - https://www.outerhebrideslepidoptera.co.uk/
OHBR Facebook page - https://www.facebook.com/groups/286293481746505/
Curracag Facebook page - https://www.facebook.com/groups/curracag
BSBI Floral Atlas - https://plantatlas2020.org/index.php/
National Biodiversity Network Atlas Scotland – https://scotland.nbnatlas.org

The first OHBR bioblitz, Balranald, North Uist, August 2010.
Photograph © Chris Johnson.

Summary and Overview

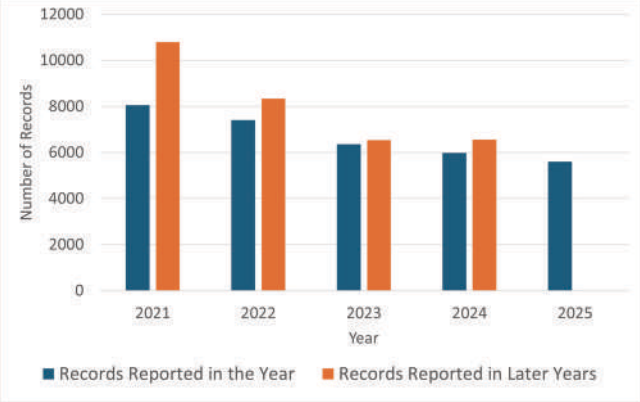
Fifteen inhabited islands together with over 100 smaller islands and skerries form the archipelago of the Outer Hebrides. From the northern tip of the island of Lewis, it is over 200 km to the island of Mingulay in the south. The archipelago and the outlying Atlantic islands of the St Kilda archipelago, the Shiants, Sula Sgeir, North Rona and the Monach and Flannan Islands form the area designated as Watsonian Vice-county 110. The old system of vice-counties is used in biological recording as the boundaries are stable and unlike the modern counties not subject to revision.

In 2025 a total of 5617 records of animals, plants, fungi,assorted chromists and bacteria were collected from the entire length of the archipelago and the remote island of Hirta (St Kilda) by 110 individuals or groups of recorders. Recording activity varies from year to year, and in 2025 information was collected from 54 hectads (10km grid map squares). Each year between 50-62 hectads are usually visited but there is no direct relationship between the number of records submitted and the area surveyed. This suggests that there are other factors involved, such as access or challenging surveying conditions. Alternatively it may be an indication that the biotopes present are characterised by low biodiversity. Information on the distribution of the main habitat types is available on Scotland's Environment website which when combined with data from the NBN Scotland Atlas can help assess which of these areas may merit further investigation and should be included in future surveys.

Outer Hebrides archipelago, situated to the west of Skye. Contains modified Copernicus Sentinel data 2018, CC BY-SA 3.0 IGO via Wikimedia

Lewis Peatlands SPA. Photograph © Christine Johnson

The designation of Lewis Peatlands as a Special Protection Area (SPA) is an important and extensive area of deep blanket bog interspersed with bog pools and freshwater lochs, which supports an important bird population. It is not an easy area to survey, and although the biodiversity may appear to be low, it supports an interesting community of plants, mosses and algae, and should not be overlooked.



The annual summary concentrates on the records received within a calendar year, however not all our recorders are able to submit their records by the end of the year. Therefore, some records are added to the database in subsequent years, and in 2025, this included 681 records of 201 species collected from 2008 to 2024. It is therefore important when making comparisons between years that records are analysed according to the sample year and not the year of addition to the database.

Taxonomic Group		Common Name	VC110[1] Species	2025[2] Species (Records)
Vertebrates	Aves[3]	Birds	421	3 (40)
	Actinopterygii	Bony fish	88	4 (7)
	Mammalia	Mammals	36	9(44)
	Elasmobranchii	Sharks, skates & rays	13	2 (3)
	Reptilia	Reptiles	5	1(3)
	Amphibia	Frogs, toads & newts	3	1 (11)
	Other Classes	Sea squirts, salps, jawless fish	40	1(1)
		Total	**606**	**21 (109)**
Invertebrates	Arthropoda	Insects (except Lepidoptera)	402	238 (768)
		Lepidoptera (butterflies & moths)	632	348 (3715)
		Crustaceans, arachnids, millipedes, isopods, spring tails	804	12 (14)
	Mollusca	Snails, slugs, bivalves,	528	11 (23)
	Annelidia	Segmented worms	448	
	Cnidaria	Corals, jellyfish, etc.	134	18 (37)
	Other Classes	Marine, freshwater, terrestrial invertebrates	312	7 (10)
		Total	**3260**	**632 (4588)**
Plants	Angiosperms	Flowering plants	1096	70 (160)
	Gymnosperms	Conifers	29	
	Lycopodiopsida	Club mosses and quillworts	7	
	Pteridophyta	Ferns & horsetails	47	5 (6)
	Bryophyta, Marchantiophyta, Anthocerotophyta	Mosses, liverworts & hornworts	576	2 (6)
	Charophyta	Stoneworts & desmids	767	300 (671)
	Chlorophyta	Green algae	129	
	Rhodophyta	Red algae	194	2 (2)
		Total	**2845**	**379 (845)**
Fungi, Lichens	Ascomycota	Cup fungi, earth tongues,lichens	955	13 (21)
	Basidiomycota	Mushrooms, puffballs, brackets, jelly fungi, rusts, smuts, lichens	523	21 (27)
	Blastocladiomycota	Saprophytic fungi	1	1 (1)
	Chytridomycota	Chytrids	6	
	Zygomycota	Bread & pin moulds	9	
	Entorrhizomycota	Root gall fungi	4	2 (3)
	Oomycota [4]	Water moulds & downy mildews	16	2 (3)
	Myxomycota [4]	Slime moulds	9	3 (3)
		Total	**1523**	**42 (58)**
Chromista		Brown seaweeds, diatoms and Cercozoa	161	3 (3)
Bacteria		Cyanobacteria	28	1 (1)
		Total	**217**	**4 (4)**

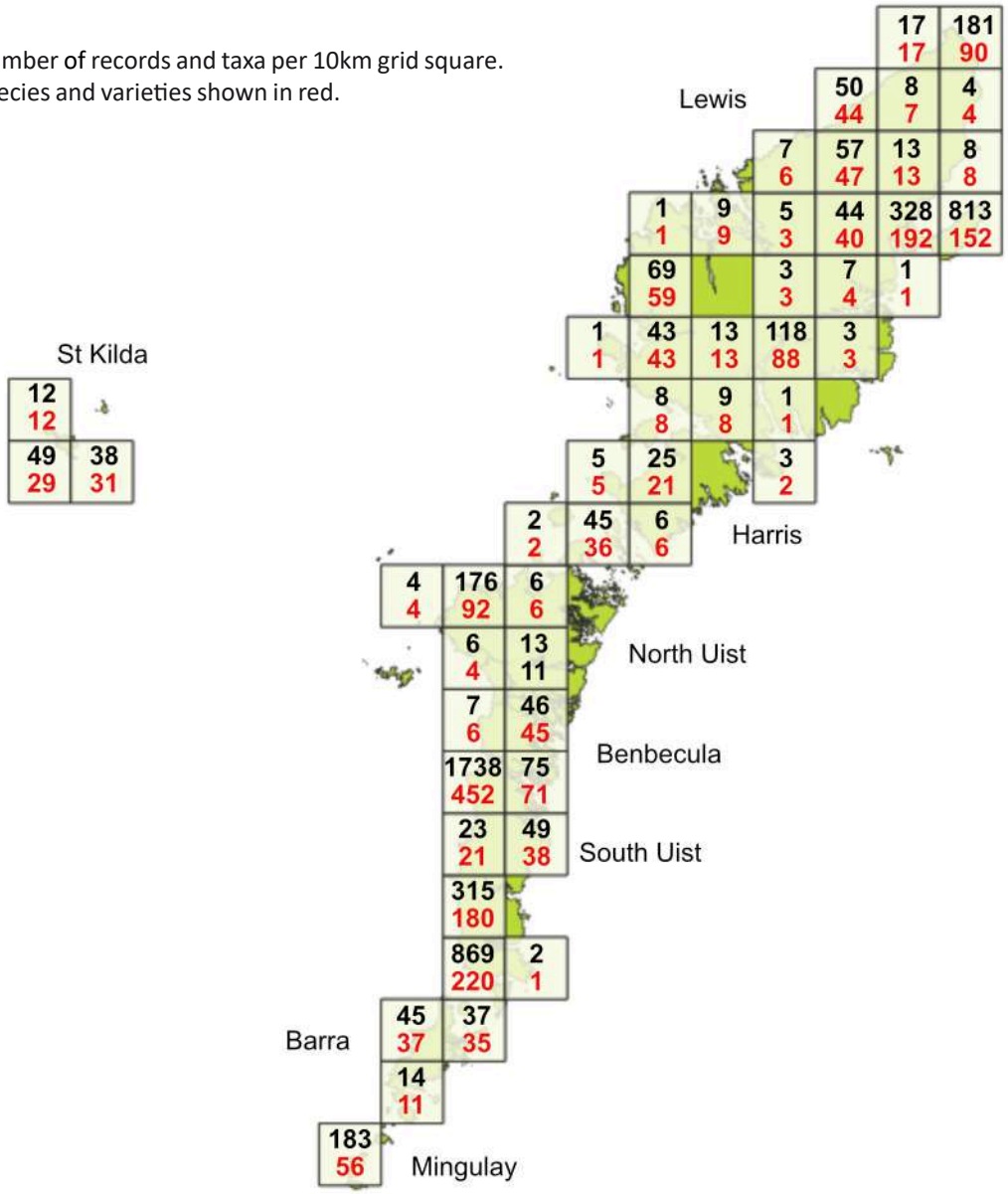
[1] The number of species for VC110 (Outer Hebrides) is based on current OHBR checklists and data from NBN Atlas Scotland as of 26/01/2026. For some taxa varieties, forms and subspecies are included. For less commonly recorded taxa the data are incomplete.

[2] This table only includes records made during 2025. However, records are often submitted in subsequent years, particularly for taxonomic groups which are difficult to identify. These records are submitted to the NBN Atlas in the OHBR datasets, and where significant numbers are involved they are noted in the text of this report.

[3] The records included here are collated through the OHBR Spring Survey.

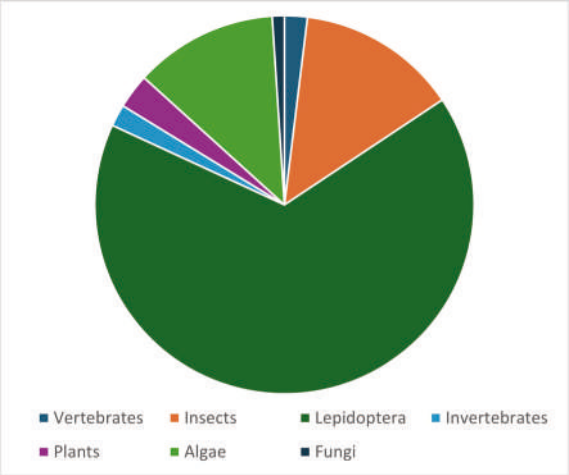
[4] Oomycota and Myxomycota are now classified as Chromista and Protista respectively, but are usually included with the fungi.

Number of records and taxa per 10km grid square.
Species and varieties shown in red.

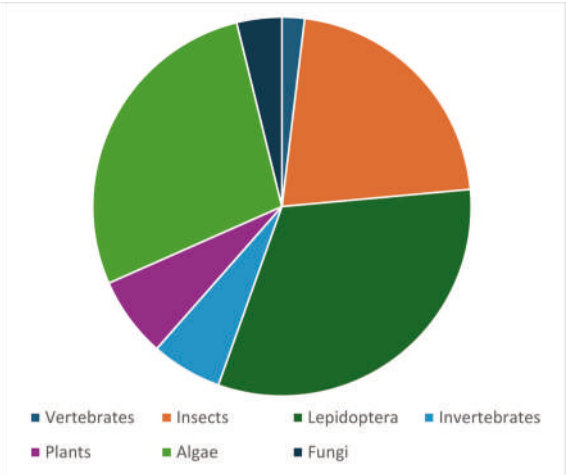


Islands	Records	Recorders
Lewis	1767	51
Great Bernera	9	5
Harris	111	18
St Kilda	100	2
Berneray	22	4
North Uist	205	15
Benbecula	105	13
South Uist	3019	22
Barra and Vatersay	96	11
Mingulay	183	12
Total	**5617**	**153**

Number of records per taxonomic group



Number of species recorded per taxonomic group



Species diversity and the number of records produced is mainly influenced by the interests of the local recorders and how they collect their records. This is a combination of sampling methods, where, when and how often they record, the types and range of species they target. A recorder operating a moth trap on a regular basis from one site may produce over a 1000 records of 100-200 species, whereas an equally skilled recorder studying moths over a wide area and using an insect net or searching for larvae will produce a smaller and more restricted set of records of a different group of species i.e. day flying rather than nocturnal moths attracted to light. Similarly, a large number of recorders may contribute a small number of records of a handful of species observed in their garden or when walking on the beach. Most of the species observations are collected by a resident community of amateur naturalists, however the number of records and the species diversity can be affected by a visit from a naturalist or a group with an interest in a specific taxonomic group.

Mapping species distribution and biodiversity and how these change over time, is not just about numbers. All the factors which may influence our observations have to be considered so that any biases in the data can be identified e.g. the sampling methods, survey dates or the weather. An increase in recording activity will not necessarily increase our knowledge of the biodiversity of our islands, unless an effort is made to target some of the under-recorded groups such as spiders or diatoms. A change in recording techniques e.g. searching for leaf mining or gall forming invertebrates, a greater use of pitfall traps or extending the recording season may also a beneficial effect on the range of species recorded, although it may not necessarily increase the number of records.

Netelia vinulae, a parasitic wasp. Photograph © Chris Johnson.

A range of insects are often caught in moth traps. Caddisflies are probably the most common, but other insects such as parasitic wasps, beetles and craneflies are often found in the moth trap by-catch. These are often released without being recorded or identified. Fortunately the OHBR recorders understand the value of the by-catch and have added some interesting and important species to the islands' species list.

The use of light to study insects is not restricted to moth traps, searching around any external light source at night can be a profitable way of recording nocturnal insects. This can involve using an insect net to sweep flying insects or a bug pot to collect from walls and surrounding vegetation.

Community-based biological recording is not perfect, however it provides a substantial amount of the data required to support an evidence based approach to land management, nature restoration projects and conservation. The Scottish Biodiversity Strategy recognises the contribution of the work of amateur naturalists in achieving the target of becoming "Nature Positive" by 2030. Each year most observers submit between 1-20 records with a handful of very experienced naturalists each submitting over 500 records. Every record added to our database contributes to providing information about our biodiversity and for monitoring the effects of climate change and land use. A single observation of a common or rare species made by chance when walking the dog should not be under-valued. Similarly, engaging with nature is recognised as being beneficial to the well-being of individuals and the wider community.

OHBR Surveys 2025

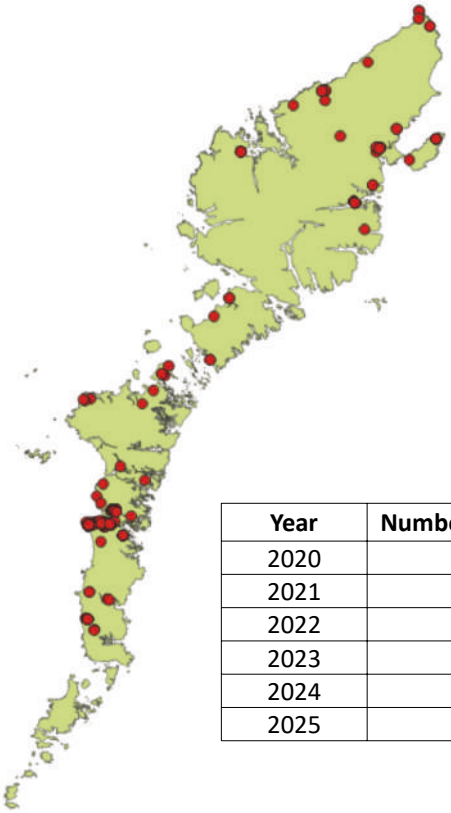
Each year we organise a small number of surveys which are designed to provide information on the distribution of a small number species or monitor changes over time. The aim is to encourage participation and focus is on species which are easy to identify and record. Supporting information on identification and recording methods is supplied on the website and on social media. Information on the results of the survey is supplied at intervals during the year and at the end of the survey.

Signs of Spring

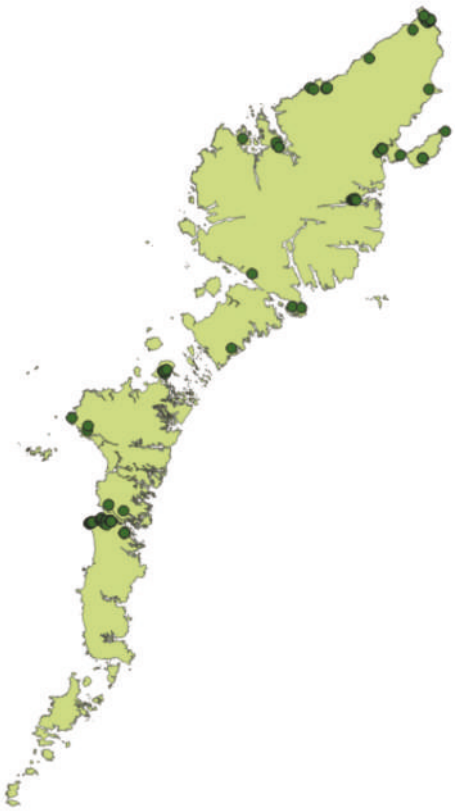
Yellow iris and Green-veined white butterfly Photographs © Christine Johnson. Swallow Photograph © Ian Thompson

This project monitors the first springtime observation of nine indicator species, three birds, three insects and three flowers, which are all common and easy to identify. This is a long-term project which aims to assess whether variation in seasonal events such as flowering dates or insect emergence are influenced by climate change. The arrival of spring in the Outer Hebrides is always unpredictable, therefore it is important that information is gathered over a number of years, and that records are collected from sites throughout the islands.

Distribution of records 2020 -2023



Distribution of records 2025



Year	Number of records
2020	62
2021	52
2022	32
2023	39
2024	48
2025	89

The level of participation in this survey has varied with a decline in the number of records and participants in 2022 and 2023. Fortunately, this trend has not continued and in 2025 there was an encouraging increase in the number of observers, records the areas covered. The sample sizes are small, and it has only been running for six years, which is a relatively short period for this type of survey. However, there are indications that there appears to be a relationship between the biological and meteorological data. This survey is a good example of how community generated data can be used to assess the influence of climate on the nature.

Cinnabar and Six-spot Burnet Moth Survey

Six -spot burnet pollinating pyramidal orchid. Photographs © Chris Johnson

Although similar in appearance the cinnabar (*Tyria jacobaeae*) and six-spot burnet (*Zygaena filipendulae*) belong to different families. In the islands there are differences in their distribution which are probably not related to under-recording, although the numbers recorded each year are small. The six-spot burnet is widely distributed in the south of the archipelago from Mingulay to Berneray and Pabbay. Further north it has been recorded at only three locations. In contrast the cinnabar is a recent arrival and although it seems to have become established in the southern end of the archipelago, as yet there is no firm evidence that the population is expanding further north.

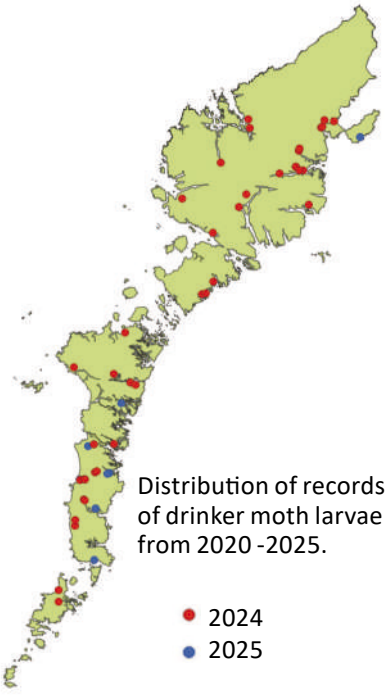
In 2024 there were only six records of the six-spot burnet and nine cinnabars. In 2025 the number of records increased marginally with 13 reports of six-spot burnet and eight cinnabars. It is possible that the numbers were affected by the poor summer weather in 2024. However, these two species are not recorded in large number, although data from the NBN Atlas currently show that there has been a decline in the number of six-spot burnet moths recorded in the islands since 2019.

Other Surveys

The duration of a survey depends on its success both in terms of participation and whether we have gained sufficient information to decide if more information is still required. The 2024 hairy caterpillar survey focused four species with very distinctive larvae: the drinker (*Euthrix potatoria*), fox moth *Macrothylacia rubi*), northern eggar (*Lasiocampa quercus*) and garden tiger (*Arctia caja*). This was a popular survey which achieved good results. However, there are still some gaps on the distribution maps, so the project was extended for another year concentrating on the drinker moth.

In 2024 there were 51 records of drinker moth larvae, in 2025 there were 10. It is possible that the small number of records were due to the weather or other ecological factors, rather than recorder effort.

Drinker caterpillar.
Photograph © Chris Johnson



Distribution of records of drinker moth larvae from 2020 -2025.

Taxonomic Summary

This summary is organised in sections according to taxonomic groups. This traditional approach collates the information on the species recorded into groups according to their biological classification. This enables comparisons to be made between years and areas with respect to recording activity and species diversity.

It is important to remember that species do not exist in isolation, they are part of ecological communities which exist within biotopes (habitat types). As producers, consumers and detritivores, animals, plants, fungi and bacteria interact at different levels to maintain a balanced ecosystem which is reflected in the biodiversity of the biotope. To begin to understand these complex systems, it is also necessary to gain an insight into the life histories of the component species and to appreciate that some species may play different roles at various stages in their life cycle. For example adult carrion beetles are often active predators whilst their larvae are detritivores, or occupy different habitats e.g. the larvae of some terrestrial insects are aquatic. There are also complex interactions between species e.g. parasitism or types of co-operation as characterised by the relationship between fungi and algae in lichens.

An appreciation of how ecosystems work and even a basic knowledge of the species we observe also enriches recording activities and engaging with nature. At a practical level it improves our ability to locate and survey target species, and to make the identification process easier. Biological recording is not just about numbers, a knowledge of the ecology of the species we observe is a critical part of interpreting the data we collect.

Purple toothwort (*Lathraea clandestine*) is a rare example of a completely parasitic plant, known from only one site in the islands. Holoparasitic plants are rare in the British Isles with 12 native and three introduced species. These plants do not have chlorophyl and are not able to photosynthesise, existing for most of their life cycle as a complex of underground shoots with roots (haustaria) attached to the host plant or a fungus. Their presence is only revealed periodically, when the flowers are produced above ground.

Photograph © Chris Johnson

Taxonomic Summary: Invertebrates

Invertebrates account for the majority of the records collected in a calendar year. This is primarily due to the predominance of the number of observations of moths and butterflies. In 2025, 4588 records of invertebrates were received, of which 3715 were Lepidoptera, 768 were other insects and 105 were miscellaneous invertebrate species. Overall the number of invertebrate records represented 81.6% of the total number of records received to date in 2025.

Variations in recorder effort and interests, and poor summer weather produces fluctuations in the number of records and species recorded. Overall the number of non-insect invertebrate records is small, usually less 3% of the annual invertebrate total. However, this can rise to 9% when there is a particular interest in a specific taxonomic group e.g. marine invertebrates.

Invertebrate Records 2025

Taxon	Records	Species
Lepidoptera	3715 (81%)	348
Other Insects	768 (17%)	228
Other Invertebrates	105 (2%)	48
Total Invertebrates	**4588**	**624**

Similarly, the annual contribution of the records of butterflies and moths can vary between 59% and 97% of the overall total. This does not always represent a decrease in the level of recording activity, but it is usually an indication of an increase in the levels of recording of other insect or invertebrate species. In 2024 there were 501 records of Diptera, which increased the contribution of the other insects category to 21.8% of the total number of invertebrate records.

Taxonomic Summary: Insects

Vine weevil (*Otiorhynchus sulcatus*), sawfly (*Tenthredo brevicornis*), twin-lobed deerfly (*Chrysops relictus*).
Photographs © Chris Johnson

There are some orders of insects which are easier to observe and identify, more numerous and charismatic, and consequently are more widely represented in the OHBR database. After the Lepidoptera, the Diptera (flies), Coleoptera (beetles) and Hymenoptera (bees, wasps and ants) are the most widely recorded groups. However, only a fraction of the species known to be present in the islands are recorded each year.

Records collected in 2025

Insect Orders		Records	Species
Diptera	Flies	198	92
Hymenoptera	Bees, wasps & ants	182	31
Coleoptera	Beetles	147	64
Lepidoptera	Butterflies & moths	3715	348
Hemiptera	Bugs	22	14
Trichoptera	Caddisflies	140	24
Psocodea	Barkflies	**2**	2
Neuroptera	Lacewings	1	1
Ephemeroptera	Mayflies	4	1
Odonata	Dragonflies	62	7
Plectoptera	Stoneflies	3	1
Dermaptera	Earwings	6	1
	Total	**4482**	**586**

Recording some of the more challenging species, which are difficult to identify, often requiring microscopy and the use of complex identification keys, or specialist surveying or trapping techniques, depends on a small number of experienced local naturalists or visiting specialists. However, each year we add some new species to the biodiversity catalogue for the islands, which are sometimes discovered by serendipitous observations made by contributors to the OHBR and Curracag social medial groups. Increasingly the community of local observers are becoming more involved in recording a wider range of insects particularly bees, hoverflies, beetles and dragonflies.

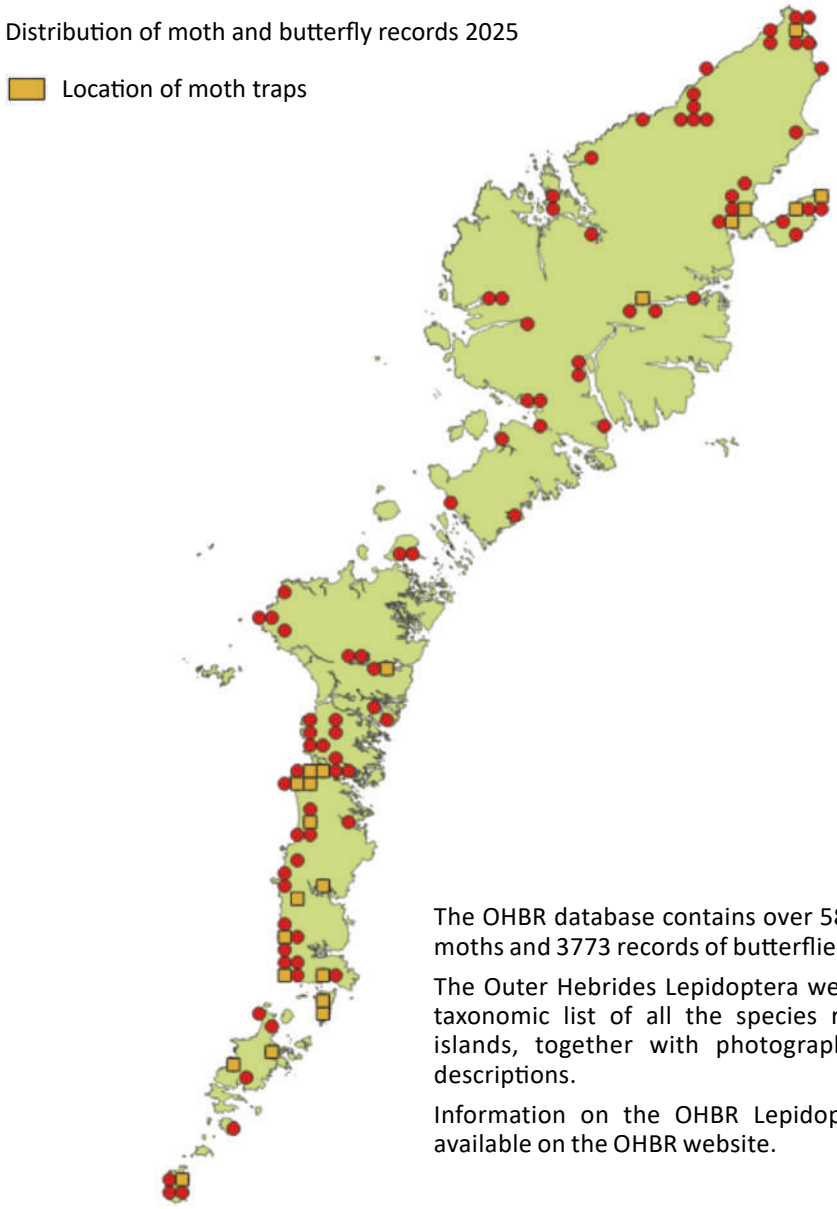
Common sexton beetle (*Nicrophorus vespilloides*).
Carrion beetle often found around small dead animals which are buried to create a food source for their larvae. Note the distinctive all black clubs on the antennae which distinguishes it from *N. investigator*.
Photograph © Christine Johnson

Insects: Lepidoptera

Recording Lepidoptera by light trapping or direct observation is a year round activity which produced 3715 records of 348 species collected by over 110 recorders from the north of the island of Lewis to the island of Mingulay in the south.

Records of butterflies, day-flying moths, larvae, pupae and leaf mining species were collected by direct observation either by general field work or participation in organised surveys. In 2025, 57 recorders produced 420 observations of 110 species from 158 locations. In comparison, 22 moth trappers submitted 3292 records of 318 species of moths from 44 locations on 158 dates from 5 January to 18 October 2025.

These two methods of collecting information are complimentary and produce a more balanced picture of lepidopteran biodiversity. Direct observations provides data on species which are often not attracted to light and enables records to be collected from a diverse range of habitats and locations. In contrast moth trapping produces information on a wide range of species even though the number of locations is restricted. This method of recording is very effective and can provide a basis for long term biodiversity monitoring.



The OHBR database contains over 58,593 records of moths and 3773 records of butterflies.

The Outer Hebrides Lepidoptera website includes a taxonomic list of all the species recorded in the islands, together with photographs and species descriptions.

Information on the OHBR Lepidoptera surveys is available on the OHBR website.

Moths

The substantial number of moth records submitted each year, the range of surveying methods and the ecological complexity of this order of insects, makes an analysis of the data beyond the scope of the annual summary of records. However, all the records are available on the NBN Scotland Atlas together with distribution maps. The list of species recorded in the islands, based on OHBR and historical data is available on the OHBR website.

This year, a small group of dedicated moth trappers produced 3290 records of moths from 23 families of micro-moths and 11 macro-moths. The number of species present in the islands varies considerably between families, some species are more common and widely distributed, others are encountered only infrequently or as migrant species. Some moths are challenging to identify and a small number require examination of the genitalia to distinguish between similar species.

Lempke's gold spot (*Plusia putnami*).
Commonly found in moth traps in July and August throughout the islands.
Photograph © Chris Johnson.

Flame carpet (Xanthorhoe designata).
Widespread in June and July and common in moth traps.
Photograph © Chris Johnson.

Macro-moth Families	Records (Species)	
	Moth Trap	Other
Drepanidae	5 (3)	
Erebidae	166 (10)	18 (6)
Geometridae	661 (71)	54 (22)
Hepialidae	25 (3)	1 (1)
Lasiocampidae	36 (3)	29 (3)
Noctuidae	1715 (94)	35 (18)
Nolidae	1 (1)	
Notodontidae	49 (7)	6 (1)
Saturniidae	8 (1)	5 (1)
Sphingidae	50 (3)	10 (4)
Zygaenidae	2 (1)	11 (1

Micro- moth Families	Records (Species)	
	Moth Trap	Other
Alucitidae	2 (1)	
Argyresthiidae	1 (1)	1 (1)
Blastobasidae	40 (3)	1 (1)
Coleophoridae	5 (5)	
Crambidae	201 (25)	14 (9)
Depressariidae	20 (9)	3 (3)
Elachistidae	3 (2)	1 (1)
Epermeniidae		1 (1)
Gelechiidae	6 (4)	4 (2)
Glyphipterigidae		1 (1)
Gracillariidae	9 (4)	5 (2)
Incurvariidae		1 (1)
Lyonetiidae		2 (2)
Momphidae	1 (1)	
Nepticulidae		3 (2)
Oecophoridae	29 (2)	4 (2)
Plutellidae	29 (1)	1 (1)
Pterophoridae	7 (4)	
Schreckensteiniidae		1 (1)
Tineidae	4 (93)	
Tortricidae	210 (46)	15 (10)
Yponomeutidae	4 (1)	2 (1)
Ypsolophidae	1 (1)	

Experienced lepidopterists use their knowledge of the larval food-plants, habitat preferences and phenology to locate either adults or caterpillars. A variety of field methods are used from hand netting to meticulous searching for larvae which form leaf mines, spin webs, roll leaves or form protective cases, to produce information on the distribution of species throughout the islands. However, the value of records submitted from casual observations by non-specialists should not be overlooked.

Belted beauty (*Lycia zonaria*). Male, female and larva.
A nationally scarce species, largely restricted to coastal machair and dunes and recorded by direct observation.
Photographs © Chris Johnson.

Examples of moths recorded in 2025 by direct observation or netting

Family	Species	Vernacular
Macro-moths		
Geometridae	*Abraxas grossulariata*	Magpie moth
Geometridae	*Camptogramma bilineata*	Yellow shell
Geometridae	*Lycia zonaria*	Belted beauty
Notodontidae	*Cerura vinula*	Puss moth
Saturniidae	*Saturnia pavonia*	Emperor moth
Sphingidae	*Laothoe populi*	Poplar hawk-moth
Micro-moths		
Argyresthiidae	*Argyresthia goedartella*	Brassy Y
Crambidae	*Agriphila straminella*	Straw grass-veneer
Elachistidae	*Elachista subalbidella*	Buff grass-miner
Epermeniidae	*Epermenia chaerophyllella*	Common ridge-back
Glyphipterigidae	*Glyphipterix forsterella*	Woodland sedge-moth
Incurvariidae	*Phylloporia bistrigella*	Striped cutter
Lyonetiidae	*Leucoptera spartifoliella*	Broom stem-miner
Nepticulidae	*Stigmella microtheriella*	Nut-tree dot
Schreckensteiniidae	*Schreckensteinia festaliella*	Blackberry skeletoniser
Yponomeutidae	*Swammerdamia caesiella*	Birch drab

Straw grass-moth (*Agriphila straminella*).
One of the grassland micro-moth species usually recorded by sweeping through vegetation using an insect net.
Photograph © Chris Johnson.

Blackberry skeletoniser (*Schreckensteinia festaliella*).
Photograph © John Kemp.

New species recorded in the Outer Hebrides in 2025

Eighteen species were recorded for the first time in 2025. This may be partially due to a increased moth trapping in Lewis, but it may also indicate an expansion in the range of some species.

Family	Species	
Macro-moths		
Geometridae	*Eupithecia subumbrata* Shaded pug	Found in a light trap on South Uist in June 2025. The species has made a striking range expansion in recent years.
Geometridae	*Acasis viretata* Yellow-barred brindle	Attracted to the light of a moth-trap on South Uist in May 2025. The species has increased in recent times and is present over much of Scotland.
Geometridae	*Lomographa bimaculata* White-pinion spotted	Recent range extensions within Scotland saw this species first arrive on South Uist in May 2025. It is mostly present in the western half of Scotland as far north as Mallaig.
Noctuidae	*Lacanobia contigua* Beautiful brocade	Light-trapped on South Uist in June 2025.
Micro-moths		
Nepticulidae	*Stigmella luteella* Short-barred dot	Larvae discovered as a leaf mine on birch in woodland on South Uist in September 2025.
Tineidae	*Psychoides filicivora* Common fern moth	First recorded in Stornoway, Lewis in June 2025. A rare species in Scotland with the few records on the west coast.
Lyonetiidae	*Lyonetia clerkella* Apple leaf miner	First recorded in Harris in August 2025. The common name is a little misleading as the larvae mine the leaves of several fruit trees plus many other shrubs and trees.
Depressariidae	*Agonopterix arenella* Brindled buff	Though found over much of Scotland this species was only discovered in VC110 during spring 2025.
Depressariidae	*Agonopterix assimilella* Speckled broom buff	An old lost photo of the species taken on 4 October 2013 became the first record for VC110. It was rediscovered early in 2025.
Depressariidae	*Agonopterix umbellana* Gorse buff	A scarce species in Scotland with most records around the Aberdeenshire coast and coastal, north of the Solway estuary. Light trapped in Stornoway in July 2025.
Gelechiidae	*Bryotropha affinis* Dark moss-moth	First recorded in Stornoway, Lewis in June 2025. The distribution for Scotland is sparse.
Blastobasidae	*Blastobasis vittata* Dotted masoner	Found in a moth trap in South Uist in Augusts 2025. This species was first recorded in the UK in 2008.
Pterophoroidea	*Amblyptilia acanthadactyla* Beautiful plume	Recorded in July 2025 in a moth trap in South Uist.
Tortricidae	*Clepsis consimilana* Rufous tortrix	A scarce species in Scotland with a few scattered, mainly coastal records. Light trapped in Stornoway in July 2025.
Tortricidae	*Cnephasia asseclana* Flax tortrix	Reasonably well documented in eastern and southern Scotland but almost lacking in the north-west. Light trapped in Stornoway in July 2025. (There is a historical record but lacking details).
Tortricidae	*Rhyacionia logaea* Elgin shoot moth	First recorded at Aline Community Woods, Lewis in April 2025 by a visiting naturalist. A minimum of 12 individuals were counted across the site, suggesting an established colony. A rare coniferous forests species confined to north-east Scotland.
Crambidae	*Evergestis forficalis* Garden pebble	First recorded in Lewis in June 2025. The distribution for Scotland is sporadic with few records in the north-west.
Crambidae	*Catoptria falsellaa* Chequered grass-veneer	Light-trapped in July at Stornoway. A remarkable record as there are no records north of the Great Glen on NBN Atlas.

New species recorded in the Outer Hebrides in 2025

Beautiful brocade (*Lacanobia contigua*).
Photograph © John Kemp.

Flax tortrix (*Cnephasia asseclana*).
Photograph © Steve Dodd.

Yellow-barred brindle (*Acasis viretata*).
Photograph © John Kemp.

White-pinion spotted (*Lomographa bimaculata*).
Photograph © John Kemp.

Apple leaf miner (*Lyonetia clerkella*).
Parasitised leaf mine on birch.
Photograph © Ollie Richings.

Shaded pug (*Eupithecia subumbrata*).
Photograph © John Kemp.

Butterflies

After a disappointing year for butterfly recording in 2024, we had hoped that we would observe a recovery in the populations in 2025. Unfortunately the number of records submitted was virtually identical, and apart from red admiral and painted lady, the numbers for remaining species were either unchanged or reduced.

Species		2024 Records	2025 Records
Orange-tip	*Anthocharis cardamines*	1	
Large white	*Pieris brassicae*	3	2
Green-veined white	*Pieris napi*	57	29
Speckled wood	*Pararge aegeria*	3	3
Small heath	*Coenonympha pamphilus*	3	4
Large heath	*Coenonympha tullia*	5	1
Meadow brown	*Maniola jurtina*	34	21
Dark green fritillary	*Speyeria aglaja*	2	6
Red admiral	*Vanessa atalanta*	34	77
Painted lady	*Vanessa cardui*	1	22
Peacock	*Aglais io*	3	1
Small tortoiseshell	*Aglais urticae*	24	7
Common blue	*Polyommatus icarus*	11	9
	Total	**181**	**182**

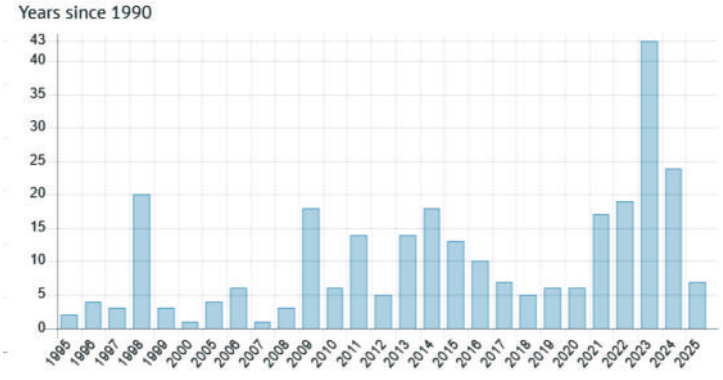
Meadow brown (*Maniola jurtina*)
Photograph © Chris Johnson

The UK Butterfly Monitoring Scheme reported that 2024 was one of the worst years for butterflies in the UK and more than half of butterfly species are now in long-term decline. There was an improvement in butterfly numbers in the UK as a whole for 2025, but whilst numbers for some species improved, others, including the small tortoiseshell, had a below average year. In the islands the summer weather was better in 2024, but not as good as on the mainland. It is interesting to note that the two species which did well are both migrants.

During 2025 we ran a survey to record the large Nymphalid butterflies - red admiral, small tortoiseshell, peacock and painted lady. These are large brightly coloured butterflies which are easy to spot, and although it was a good year for red admirals, the other species were less abundant. The number of painted lady butterflies can vary markedly from year to year depending on the numbers arriving from North Africa and Southern Europe, whilst the peacock has yet to become established in the islands. However the continued decline in the numbers of small tortoiseshells may be a matter for concern.

Small Tortoiseshell (*Aglais urticae*)

There has been a reported decline of 76% over the last decade in the UK. However, in the islands there has been an increase in numbers prior from 2021 -2023. This recent fluctuation may be weather related, but it is a species which requires watching.

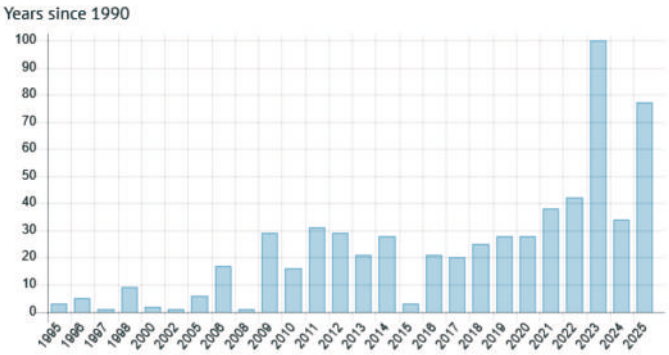


Outer Hebrides data. Graph © NBN Scotland Atlas

Small tortoiseshell (*Aglais urticae*)
Photograph © Christine Johnson

Red Admiral (*Vanessa atalanta*)

In 2025 the red admirals were noticeably abundant and the records may not fully reflect the numbers present. The increase in the number of records for 2023 and 2025 areprobably the result of a combination of migrants arriving from the south during the spring possibly supplemented by a successful breeding season.

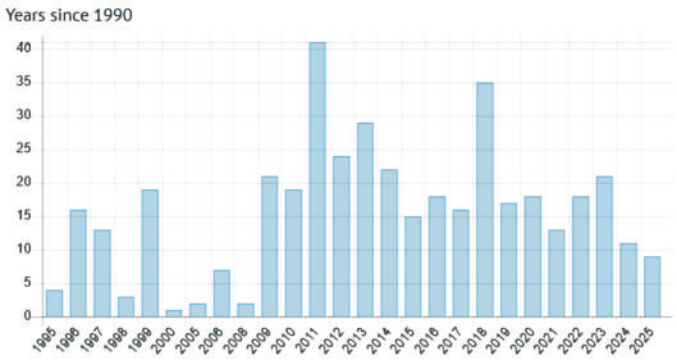


Outer Hebrides data. Graph © NBN Scotland Atlas

Red Admiral (*Vanessa atalanta*)
Photograph © Tomas MacDhomhnaill

Common Blue (Polyommatus icarus)

A grassland species usually found in association with bird's-foot-trefoil which is the preferred larval food plant. Until 2024 the records show a degree of stability, so it is possible that numbers may recover in 2026



Outer Hebrides data. Graph © NBN Scotland Atlas

Common blue (*Polyommatus icarus*)
Photograph © Chris Johnson

The butterfly fauna is small with only 11 species recorded on a regular basis. When only small numbers are recorded each year and the distribution may be restricted to certain islands, monitoring the populations and interpreting the results is not easy. Small populations are always vulnerable, particularly when they are geographically isolated either through geography or habitat loss. This explains why pioneer populations which are formed when a species is expanding its range struggle to become established. This is probably the case with the peacock and orange-tip which are only recorded in very small numbers. There has been a small population of speckled woods in Stornoway for over 20 years, but in the last 2-3 years there have been reports of this species from other parts of Lewis. This is a woodland species and the establishment of satellite colonies may depend on the availability of suitable habitat.

The other species on our watch list are grayling, dark green fritillary and small heath which are restricted to South Uist. The grayling has not been recorded since 2023 and it is not known whether the small population on the southern end of South Uist and Eriskay is viable. It is possible that the small numbers of dark green fritillary, small and common heath are the result of under-recording or indications of species in decline. Perhaps 2026 will be a butterfly summer and we will be able to gain some indication on the status of all the butterfly populations in the islands.

Insects: Diptera

With the exception of the hoverflies, Diptera are probably not the most attractive taxonomic groups. They can be difficult to identify and therefore remain an under-recorded group. The current Checklist of Diptera of the British Isles (Chandler 2025) lists 7283 species and the list for the Outer Hebrides is currently 899.

Record summary 2025

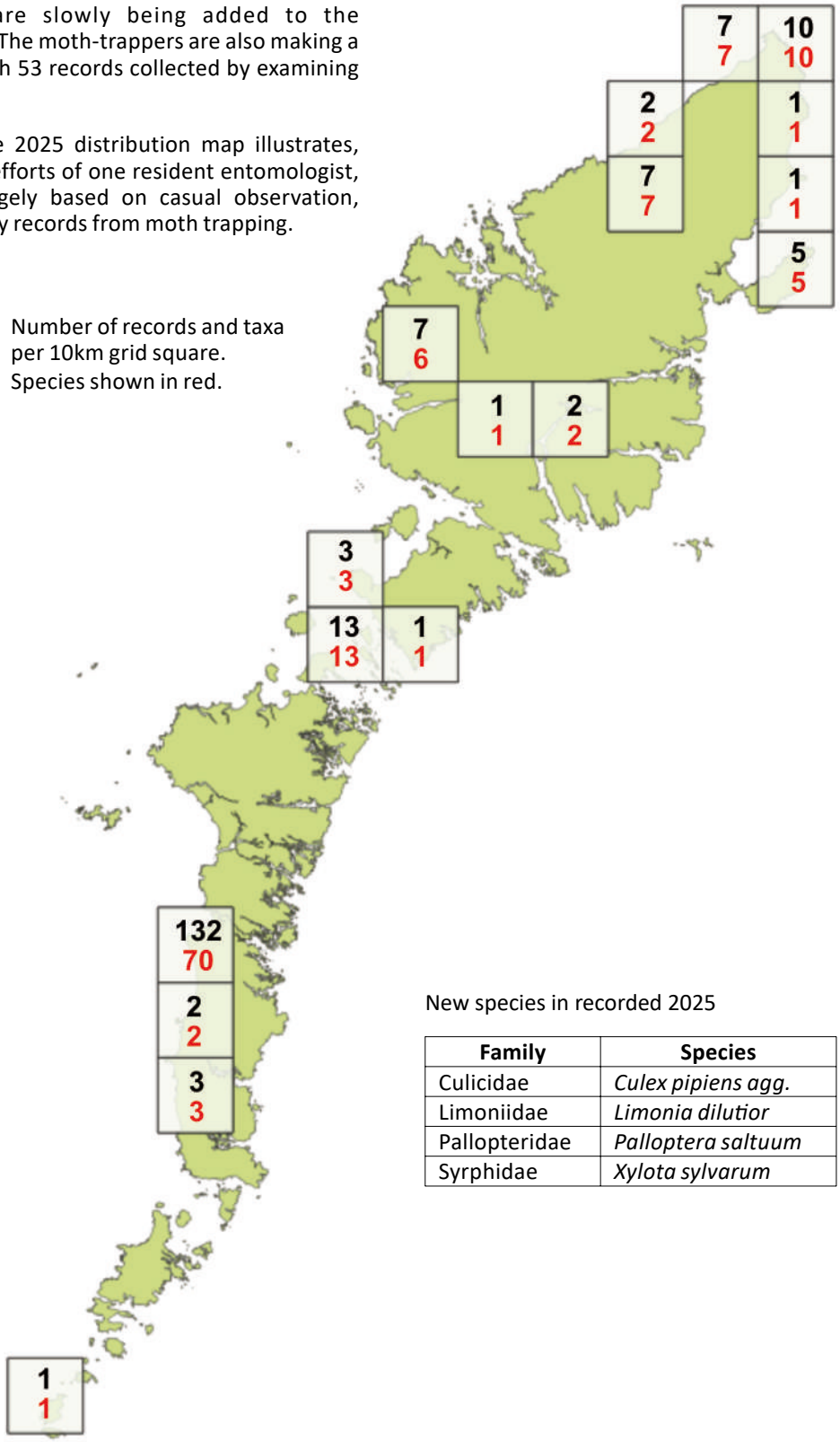
Taxon Family		VC110	Species	Records	Recorders
Tipulidae	Long-palped craneflies	81	9	46	6
Pediciidae	Hairy-eyed craneflies	4	2	3	2
Limoniidae	Short-palped craneflies	43	8	11	1
Bibionidae	St Mark's flies	8	3	6	4
Cecidomyiidae	Gall-midges	43	1	1	1
Psychodidae	Owlet-midges, mothflies	3	1	1	1
Trichoceridae	Window-gnats	3	2	2	1
Culicidae	Mosquitoes	2	1	1	1
Anisopodidae	Window-gnats	4	2	6	2
Ceratopogonidae	Biting midges	16	1	5	4
Rhagionidae	Snipeflies	3	2	3	3
Tabanidae	Horseflies	5	2	5	3
Stratiomyidae	Soldierflies	4	1	1	1
Hybotidae	Dance flies	52	1	1	1
Empididae	Dance flies	31	1	1	1
Dolichopodidae	Long-legged flies	70	1	3	2
Lonchopteridae	Pointed-wing flies	2	1	1	1
Syrphidae	Hoverflies	81	22	66	8
Pallopteridae	Trembling-wing flies	1	1	1	1
Tephritidae	Gallflies	13	1	1	1
Coelopidae	Kelp flies	3	3	7	1
Agromyzidae	Leaf-miner flies	33	2	2	1
Sphaeroceridae	Lesser dungflies	32	1	1	1
Drosophilidae	Fruit flies	6	1	1	1
Ephydridae	Shoreflies	24	1	1	1
Hippoboscidae	Birdlice-flies	4	1	1	1
Scathophagidae	Dungflies	12	2	5	3
Anthomyiidae	Root-maggotfFlies	44	1	1	1
Fanniidae	Lesser houseflies	10	1	1	1
Muscidae		82	4	5	2
Calliphoridae	Blowflies	17	3	6	2
Polleniidae		1	1	1	1
Tachinidae		19	1	1	1
	Total	**756**	**85**	**198**	

In 2025, 198 records of 85 species, were recorded, a substantial decrease in the numbers recorded in 2024, 2023 and 2022. However, in 2022 and 2023, the number of records was boosted by the presence of visiting entomologists.

The Diptera are a very diverse and ecologically important group which present a challenge to a small biological recording community. More recorders are becoming interested in hoverflies and craneflies and new species are slowly being added to the vice-county list. The moth-trappers are also making a contribution with 53 records collected by examining the by-catch.

However, as the 2025 distribution map illustrates, apart from the efforts of one resident entomologist, recording is largely based on casual observation, supplemented by records from moth trapping.

Number of records and taxa per 10km grid square. Species shown in red.



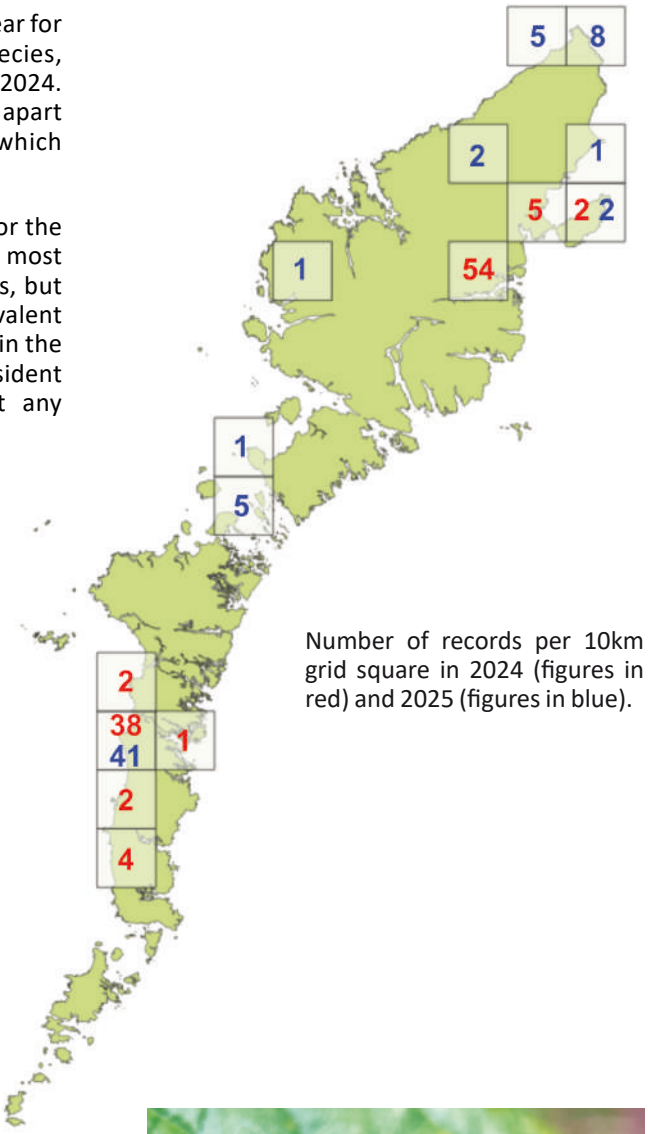
New species in recorded 2025

Family	Species
Culicidae	*Culex pipiens agg.*
Limoniidae	*Limonia dilutior*
Pallopteridae	*Palloptera saltuum*
Syrphidae	*Xylota sylvarum*

Syrphidae: Hoverflies

The figures suggest that 2025 was not a good year for hoverflies with only 66 records of 22 species, compared with 108 records of 25 species in 2024. The species composition in both years is similar apart from the absence of *Cheilosia illustrata* which accounted for 9% of the records in 2024.

If the distribution of the records is compared for the two years, it is interesting to note that in 2024 most records originated from two 10km grid squares, but in 2025 there are no records from the equivalent square in Lewis. Therefore, the 42% difference in the number of records can be attributed to one resident specialist recorder being unable to submit any records for 2025.



Number of records per 10km grid square in 2024 (figures in red) and 2025 (figures in blue).

Cheilosia illustrata.
A bumblebee mimic, not recorded in 2025.
Photograph © Chris Johnson.

Marmalade hoverfly (*Episyrphus balteatus*).
One of the most commonly recorded hoverflies.
Photograph © Chris Johnson.

Xylota sylvarum.
A new hoverfly species for VC110
Photograph © Debbie Storrow.

Tipulidae, Pediciidae, Limoniidae: Craneflies

Craneflies are not photogenic and can be difficult to identify, therefore most of the records are submitted by a small number of specialists. However, up to half the records are collected as by-catch from moth trapping, so it is possible that the number of recorders may increase as they become more experienced.

In 2025, there was a substantial decrease in the number of records submitted compared with 2024. This was of the same magnitude as observed in the records for hoverflies and again it could be attributed to the absence of records from a specialist recorder.

Family	2024		2025	
	Records	Species	Records	Species
Tipulidae	88	11	46	9
Pediciidae	1	1	3	2
Limoniidae	71	6	11	8
Total	160	18	60	19

In October, a new species Limonia dilutior, was added to the species list for the Outer Hebrides.

Female *Tipula oleracea*.
Photograph © Chris Johnson

This is a common species which emerges in the early summer with a smaller second generation often present in August. In appearance it is very similar to T. paludosa which is present mainly from July to August. There are periods when both species are present, and identification can be problematic. However, the females of these two species are easy to distinguish: in paludosa the wings when folded back do not reach to the

Other families

In the OHBR database there are 3942 records of Diptera, comprising 463 species from 59 families. If the craneflies and hoverflies are excluded (four families) there are 1939 records of 335 species. Currently, other families represent almost 50% of the records and 72% of the species. However, we have only been able to collect records from just over half of the species of Diptera recorded in the Outer Hebrides, which presents a major challenge in mapping the biodiversity of this ecologically important group.

Many of the records of these flies have been collected by specialists with the knowledge and skills to locate and identify these more difficult species. However, some species can be identified by direct observation or from photographs and can be added to the database from casual observations. Records of Diptera as larvae are more unusual and are almost entirely derived from observations of leaf mines or plant galls. Many of the flies which use a plant host can be identified if the recorder is a competent botanist as often the species is host specific. Similarly species which rely on carrion as food source for their larvae can be caught using a trap baited with a carcass. These are further examples where a knowledge of the natural history of a target taxon is an aid to recording.

Rhagionidae:
Black snipefly (*Chrysopilus cristatus*)
Not recorded as frequently as the more familiar down looker snipefly.
Photograph © Chris Johnson.

Agromyzidae:
Phytomyza aquilegia.
Leaf mining species, larvae found in *Aquilegia* leaves.
Photograph © Christine Johnson.

Tachinidae:
Tachina grossa.
Larvae parasitise the caterpillars of oak eggar and fox moths.
Photograph © Chris Johnson.

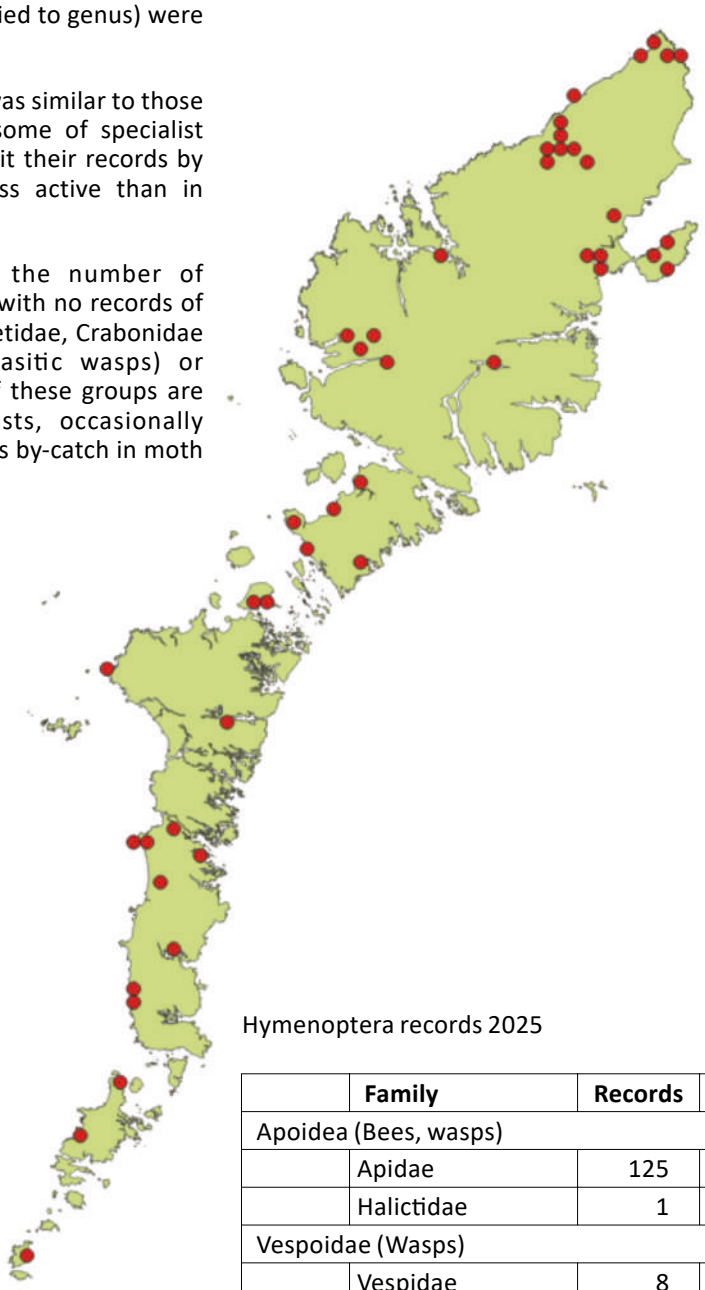
Insects: Hymenoptera

A total of 182 records from 9 families of 31 taxa (some records were only identified to genus) were submitted by 21 recorders.

Overall the number of records was similar to those of 2024. We are aware that some of specialist recorders were unable to submit their records by the end of 2025, or were less active than in previous years.

There is some variation in the number of infrequently recorded families, with no records of Andrenidae (mining bees), Colletidae, Crabonidae (sand wasps), Figitidae (parasitic wasps) or Siricidae (horntails). Records of these groups are usually collected by specialists, occasionally through casual observation or as by-catch in moth traps.

Distribution of Hymenoptera records 2025



New species in recorded 2025

Family	Species
Cynipidae	*Andricus curvator.*
Ichneumonidae	*Acrodactyla degener*
Ichneumonidae	*Astiphromma*
Ichneumonidae	*Cubocephalus sperator*
Ichneumonidae	*Oedemopsis scabricula*
Ichneumonidae	*Ophion perkinsi*

Hymenoptera records 2025

	Family	Records	Species
Apoidea (Bees, wasps)			
	Apidae	125	7
	Halictidae	1	1
Vespoidae (Wasps)			
	Vespidae	8	3
Formicoidea (Ants)			
	Formicidae	19	2
Chrysidoidea (Ruby wasps)			
	Chrysididae	1	1
Cynipoidea (Gall wasps)			
	Cynipidae	1	1
Ichneumonoidea (Parasitic Hymenoptera)			
	Ichneumonidae	21	11
	Braconidae	3	2
Tenthredinoidea (Sawflies)			
	Tenthredinidae	3	3

Apoidea: Bees

There are currently 22 species (including two species aggregates) recorded in the OHBR database. The list is dominated by the bumblebees (genus *Bombus*), but also includes five species of mining bees (Andrenidae), two species of colletes (Colletidae) and two Crabronidae taxa (one species and one genus). In addition there are two records of the early bumblebee (*Bombus pratorum*) from Stornoway in 2023 in the NBN Scotland Atlas. *Bombus magnus*, *B. terrestris* and *B. cryptarum* can only be distinguished by examination of a specimen and are usually included in the species aggregate.

Records summary

Apoidea Species		**2010-2024**	**2025**
Bombus muscorum	Moss Carder	1116	27
Bombus lucorum/terrestris/ magnus/cryptarum	White-tailed bumblebee	785	41
Bombus distinguendus	Great yellow bumblebee	379	14
Bombus pascuorum	Common carder	320	25
Bombus hortorum	Garden bumblebee	202	8
Bombus jonellus	Heath bumblebee	174	9
Bombus magnus	Northern white-tailed bumblebee	30	
Bombus cryptarum	Cryptic bumblebee	4	1
Bombus bohemicus	Gypsy cuckoo bee	8	
Bombus terrestris	Buff-tailed bumblebee	6	
Apis mellifera	Western honey bee	7	
Lasioglossum albipes	Bloomed furrow bee	3	1
Nomada marshamella	Marshams's nomad bee	1	
Andrena ruficrus	Northern mining bee	11	
Andrena tarsata	Tormentil mining bee	5	
Andrena clarkella	Clarke's mining bee	4	
Andrena coitana	Small flecked mining bee	2	
Andrena scotica	Chocolate mining bee	4	
Colletes floralis	Northern colletes	160	
Colletes succinctus	Heather colletes	6	
Mellinus arvenis	Field digger wasps	2	
Ectemnius		1	

Great yellow bumblebee
Illustrations © Bill Neill

Garden bumblebee

White-tailed bumblebee

moss Carder

Ichneumonoidea: Parasitic Wasps

In 2025, 24 records of 12 taxa of parasitic wasps (Ichneumonidae and Braconidae) were collected by 10 recorders. Twenty two of these were collected as by-catch from moth traps. The current taxonomic list for the islands for this group comprises 73 taxa (species and genera) of ichneumons and 12 taxa (species and genera) of braconids. Not all records can be identified to species level.

Ichneumons and braconid wasps can be difficult to identify, and even experienced entomologists often require expert advice. In recent years more information has become available which has increased the number of species which can be identified beyond genus level. This has encouraged an interest in this particular group which are not uncommon visitors to moth traps.

	Records		Records
Ichneumonidae		**Brachonidae**	
*Acrodactyla degener**	1	*Macrocentrus nitidus*	1
*Astiphromma**	1	*Zele albiditarsus*	2
Cidaphus atricillus	1		
*Cubocephalus sperator**	1		
Iseropus stercorator	1		
Netelia vinulae	3		
*Oedemopsis scabricula**	1		
Ophion inclinans	1		
Ophion obscuratus agg.	1		
*Ophion perkinsi**	1		
Ophion variegatus	9		

Record summary 2025

* Taxa not previously recorded in the Outer Hebrides

Ophion obscuratus. Photograph © Chris Johnson.

Other Families: Wasps, Ants, Sawflies

This eclectic group of hymenopteran families is under represented in the database. Their distribution and biodiversity in the islands currently is uncertain.

In general they are not easy to identify and most of the records are from casual observation. They are interesting and ecologically important for their role as pollinators and predators and for their interactions with plants and fungi.

In 2025, there were 32 records of 10 taxa collected by four recorders. This included one new species, oak curved-leaf gall wasp (*Andricus curvator*). This wasp has a complex natural history with sexual and asexual generations forming galls in the twigs, leaves and buds of oaks. There are nine other records of four species of gall wasps in the OHBR database which forms galls on oaks. As they are host specific there distribution is linked to the presence of oak, which is not abundant in the islands.

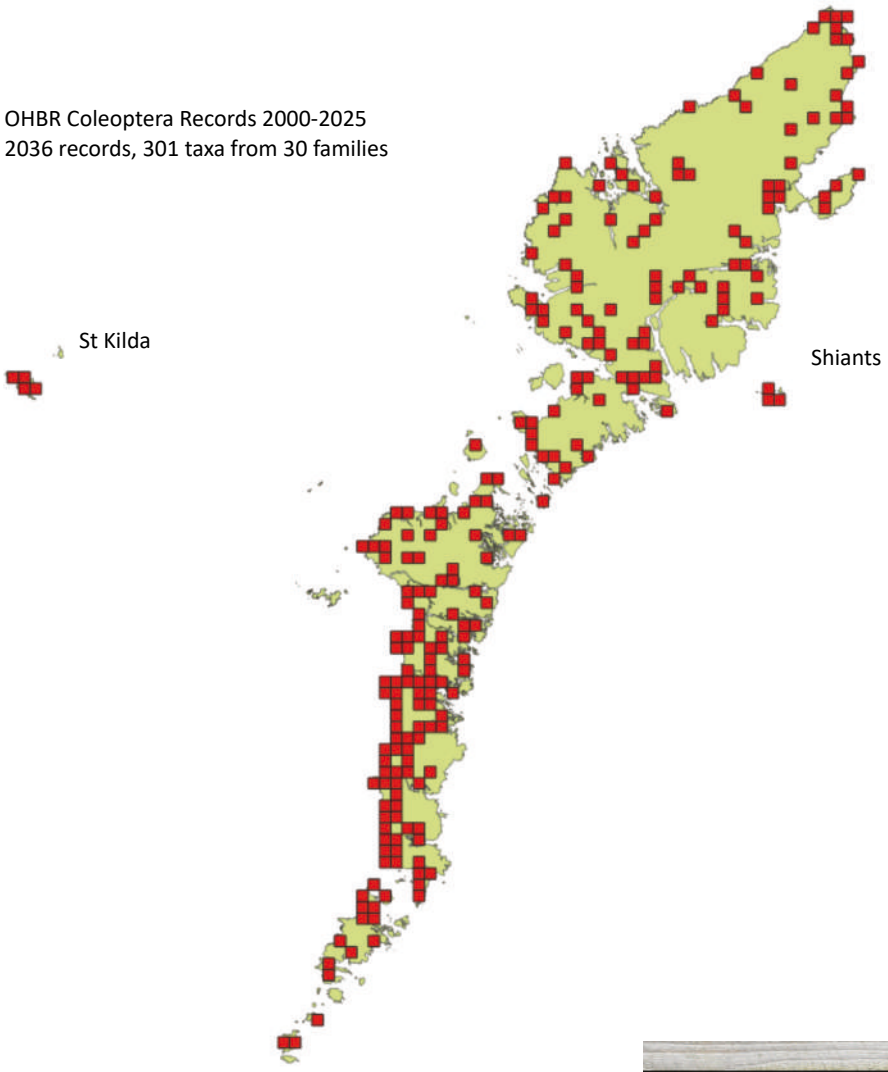
Record summary 2025

Taxa	Records
Vespidae: Wasps	
Ancistrocerus	1
Dolichovespula sylvestris	4
Vespula rufa	3
Chrysididea: Ruby Wasps	
Chrysis	1
Cynipidae: Gall Wasps	
Andricus curvator	1
Formicidae: Ants	
Myrmica ruginodis	18
Myrmica scabrinodis	1
Tenthredinidae: Sawflies	
Dolerus aericeps	1
Rhogogaster	1
Tenthredo	1

Marble gall causer *(Andricus kolleri)* galls on oak. Photograph .

Insects: Coleoptera

The beetle fauna of the Outer Hebrides is both diverse and widespread. There are currently 14,575 records documenting 552 taxa on the NBN Atlas Scotland from a variety of sources. However, this does not include data from a number of published and unpublished studies. The OHBR database currently holds 2036 records from 301 taxa. Many of these have been submitted by visiting specialists which has extended our knowledge of the biodiversity of the islands' Coleoptera. The resident community of biological recorders continue to make a considerable contribution, adding new species to the taxonomic list and increasing the coverage of the species distribution map.



A range of techniques are used to collate information on the biodiversity of the islands' beetles, in addition to direct observations, records are collected from pitfall trapping, the by-catch from moth traps and more recently from Tullgren funnels.

Tullgren funnels are used to collect insects and other small invertebrates from leaf litter, tide wrack, compost and similar material. The funnel contains a tray with a either a coarse of fine mesh bottom which allows the invertebrates to fall from the collected organic material into a collection bottle. A lamp can be placed over the funnel to encourage the invertebrates to go the bottom of the tray and fall thought the mesh.

Tullgren funnel.
Photograph © Christine Johnson.

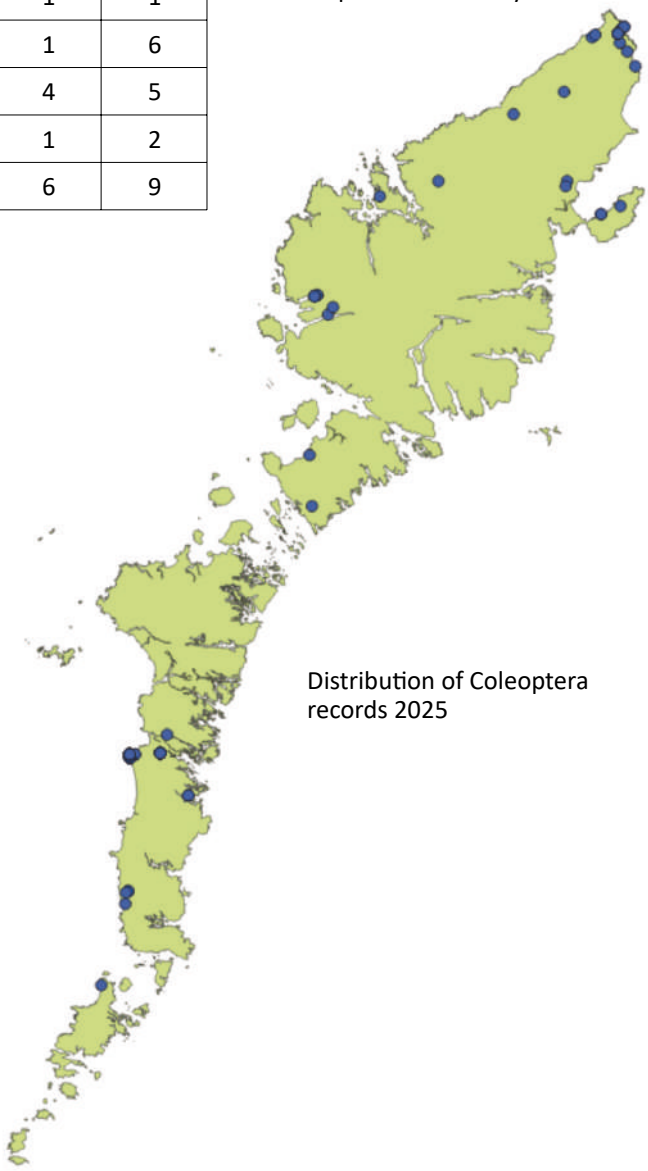
Family		Species	Records
Dytiscidae	Diving beetles	1	1
Carabidae	Ground beetles	15	22
Hydrophilidae	Water scavenger beetles	2	2
Ptiliidae	Feather-wing beetles	1	1
Leiodidae	Round fungus beetles	2	5
Silphidae	Burying beetles	5	25
Staphylinidae	Rove beetles	18	26
Geotrupidae	Dor beetles	1	2
Scarabaeidae	Dung beetles	3	26
Elateridae	Click beetles	2	7
Nitidulidae	Sap beetles	1	1
Cantharidae	Soldier beetles	1	7
Nitidulidae	Sap beetles	1	1
Coccinellidae	Ladybirds	1	6
Chrysomelidae	Leaf beetles	4	5
Apionidae	Seed weevils	1	2
Curculionidae	Weevils	6	9

A total of 147 records of 64 species from 17 families were collected during 2025. Although 53% of the records were derived from direct observation, they were mainly collected by experienced recorders and entomologists. The remaining records were either moth trap by-catch or pitfall trap or Tullgren funnel collections. Some of the larger, more colourful species are reported as casual observations by the community, but in 2025 these were unusually absent.

Two new species were recorded, O*xypoda spectabilis* and *O. vittata*, both found in a pitfall trap on the same day. These are both rare species and O. vittata is almost certainly a first record for Scotland. However, there may be an element of under-recording as they are difficult species to identify.

Clay-coloured weevil *(Otiorhynchus singularis).* Photograph © Natalie Ward.

This is the first record from Lewis, all the previous records are from South Uist.



Distribution of Coleoptera records 2025

Insects: Trichoptera

Caddisflies

Once again in 2025, almost all the 140 records were collected from moth-trap by-catch from a single study site in South Uist. One record was obtained from a moth trap in Lewis and two records were obtained from samples collected with a plankton net from a freshwater loch in North Uist.

This type of long-term biodiversity monitoring study provides valuable data for identifying the impacts of climate change and ecological degradation.

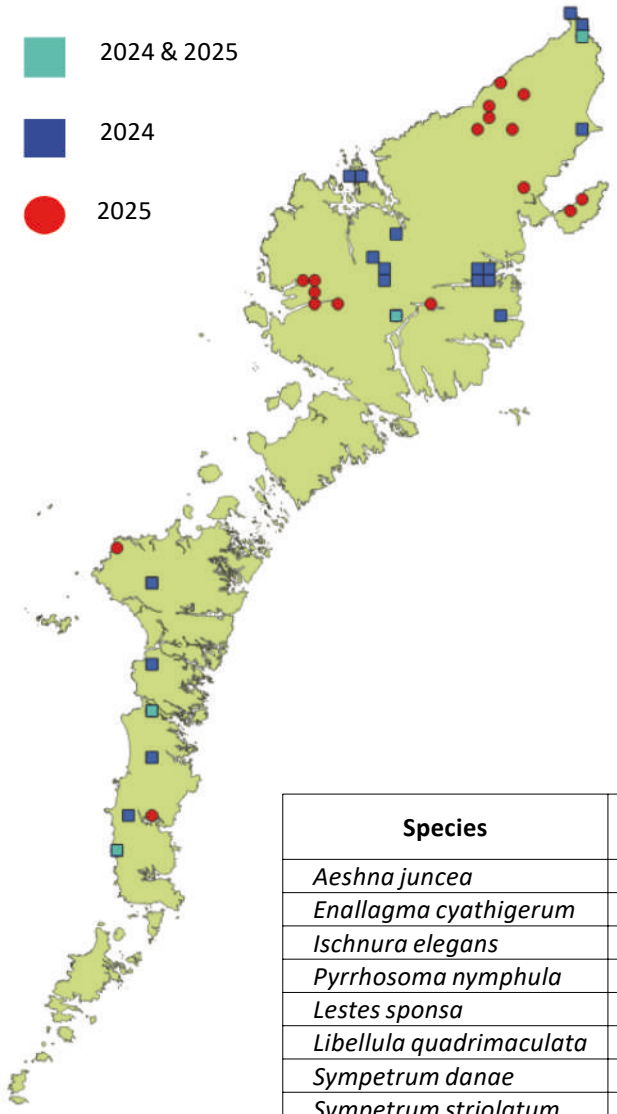
The OHBR database currently holds 1253 records from 35 species. There are a further 40 species recorded on the NBN Atlas from a variety of species. These include species recorded as larvae from freshwater surveys.

The number of Trichoptera records on the Atlas includes some duplication, with c.370 OHBR records repeated in the UK Trichoptera (Caddisfly) Recording Scheme dataset. This reduces the total number of records to 2315.

Family	Species	Records 2012-2024	Records 2025
Beraeidae	*Beraea maurus*	1	
Hydropsychidae	*Hydropsyche siltalai*	2	
Lepidostomatidae	*Lepidostoma hirtum*	11	
Leptoceridae	*Athripsodes aterrimus*	1	1
	Athripsodes cinereus	11	7
	Ceraclea fulva	23	2
	Mystacides azurea	11	2
	Oecetis furva	18	4
	Oecetis lacustris	4	2
	Oecetis ochracea	42	3
	Triaenodes bicolor	3	1
Limnephilidae	*Anabolia nervosa*	2	
	Halesus radiatus	15	1
	Limnephilus affinis	97	9
	Limnephilus auricula	2	
	Limnephilus elegans	73	14
	Limnephilus griseus	3	
	Limnephilus hirsutus	24	4
	Limnephilus lunatus	79	4
	Limnephilus luridus	14	5
	Limnephilus marmoratus	207	26
	Limnephilus pati	7	1
	Limnephilus sparsus	101	11
	Limnephilus vittatus	8	3
	Stenophylax permistus	52	5
Philopotamidae	*Philopotamus montanus*	3	
Phryganeidae	*Agrypnia varia*	34	5
	Phryganea grandis	48	7
Polycentropodidae	*Cyrnus flavidus*		
	Plectrocnemia conspersa	31	19
	Polycentropus flavomaculatus	15	1
	Polycentropus irroratus	6	
Psychomyiidae	*Tinodes maclachlani*	2	
	Tinodes waeneri	40	3
Sericostomatidae	*Sericostoma personatum*	3	
	Total	**1111**	**140**

Dragonflies & Damselflies

Distribution of Odonata Records 2024 & 2025



Blue-tailed damselfly (*Ischnura elegans).*
Aquatic larva.
Photograph © Christine Johnson.

Species	Common Name	Records 2025	Records 2024
Aeshna juncea	Common hawker	10	2
Enallagma cyathigerum	Common blue damselfly	10	6
Ischnura elegans	Blue-tailed damselfly	10	6
Pyrrhosoma nymphula	Large Red damselfly	16	14
Lestes sponsa	Emerald damselfly		
Libellula quadrimaculata	Four-spotted chaser	2	4
Sympetrum danae	Black darter	10	12
Sympetrum striolatum	Common darter	4	11
	Total	**62**	**53**

In 2025 half the records were supplied by visiting naturalists, with five resident recorders collecting the remainder. In 2024 only eight of the 53 records were supplied by visitors. This is illustrated by the differences in the distribution of recording locations for 2024 and 2025.

There are only eight species of dragonflies and damselflies routinely recorded in the islands, and the number of records varies annually. This is probably a result of changes in recorder activity, although the variability in the weather in Hebridean summers may also play a role.

Dragonflies and damselflies have an aquatic larval stage and a terrestrial aerial adult stage, this requires an ecologically correct combination of both freshwater and adjacent terrestrial habitats. As the adults and larvae are both predators and prey they have a key role in maintaining ecological balance. Monitoring the distribution of local populations can be used as an indicators of the quality and health of freshwater and adjacent habitats. Recording aquatic larvae is an important component in monitoring Odonata populations and there has been decline in the number of larval records in recent years. This is a very good reason for encouraging an interest in pond dipping and freshwater habitats.

Insects: Hemiptera

This ecologically important and diverse order of insects is under-recorded in the islands. There are currently only 359 records from 67 species in the OHBR database. Although it includes many familiar aquatic and terrestrial bugs: aphids, leaf hoppers, shield bugs, water boatmen and pondskaters, Hemiptera attract little attention from the resident biological recording community. Some species can be readily identified from photographs, but others require expert attention.

Most records are collected from casual observation, and in 2025 there were 23 records from 14 taxa. This small list included three taxa which had not been previously recorded in the islands: two aphids (*Hyperomyzus (Hyperomyzus) pallidus* and *Periphyllus aceris*) and a mirid bug (*Dicyphus* sp.). *Periphyllus aceris* is an aphid found on the underside of *Acer* species*, Hyperomyzus (Hyperomyzus) pallidus* causes curling on gooseberry leaves, and *Dichypus* species are predatory bugs which can be used as biological control agents in greenhouses.

Record summary 2025

Family	Species		Records
Acanthosomatidae	*Acanthosoma haemorrhoidale*	Hawthorn shieldbug	1
Anthocoridae	*Anthocoris nemorum*	Common flower bug	2
Aphididae	*Brachycolus cerastii*		1
Aphididae	*Hyperomyzus (Hyperomyzus) pallidus*		1
Aphididae	*Periphyllus aceris*		1
Aphrophoridae	*Philaenus spumarius*	Common froghopper	3
Corixidae	*Sigara (Sigara) dorsalis*	Water boatman	2
Gerridae	*Gerris*	Pondskater	1
Liviidae	*Livia juncorum*		1
Miridae	*Closterotomus norwegicus*	Potato capsid	2
Miridae	*Dicyphus*		1
Miridae	*Stenodema (Brachystira) calcarata*		2
Nabidae	*Nabis (Nabicula) flavomarginatus*	Broad damselbug	1
Veliidae	*Velia*	Velia	4
	Total		**23**

Hawthorn shieldbug
(*Acanthosoma haemorrhoidale)*
Photograph © Summer Harrison

Recorded for the second time in 2025. Both records are from the same area of mixed deciduous woodland in South Uist.

The larvae feed on hawthorn berries from May to October, but will also use birch, oak and hazel. The new generation of adults emerges in August-September and overwinters, therefore the best time to search for the adults is from August to May.

Common froghopper (*Philaenus spumarius)*
Photograph © Summer Harrison

This is a common, widely distributed species and the most commonly recorded Hemipteran species. It is easy to recognise as the larvae produce 'cuckoo-spit' on plants.

Insects: minor orders

Ten minor orders are included in the insect phylum, and they are infrequently recorded. A survey of common earwigs was organised in 2021, otherwise the records are accrued by casual observation. Many of these species are inconspicuous and can be difficult to identify. However, they are part of the islands' biodiversity and efforts should be made to encourage the recording community to take an interest in some of the species which can be identified with relative ease.

Order		Records 2025	Species 2025	Records prior to 2025	Species prior to 2025
Archaeognatha	Bristletails			34	2
Dermaptera	Earwigs	6	1	166	1
Ephemeroptera	Mayflies	4	1	42	3
Megaloptera	Alderflies			3	1
Neuroptera	Lacewings	1	1	8	3
Orthoptera	Grasshoppers			50	3
Plecoptera	Stoneflies	3	1	30	3
Psocodea	Barkflies	2	2	16	4
Siphonapteraa	Fleas			5	4
	Total	**16**	**6**	**356**	**24**

Bristletail (*Petrobius* sp.).
Photograph © Simon Davies.

Currently there are only 34 records of *Petrobius* in the OHBR database and there have been no confirmed records since 2021. There are two species present, with only a single record of *P. brevistylis*, from St Kilda, the remainder are all *P. maritimus*.

Apart from a single record from the north of Lewis in 2017, the remainder are from the southern part of the archipelago, including some of the smaller islands. Both species occupy the same habitat, above the high water mark on the coast, under stones and in crevices. Care is required to separate the two species: the 8th abdominal segment is prolonged into rounded lobes in *P. brevistylus* and absent in *P. maritimus*.

The current distribution is based almost entirely on the work of one local recorder, who was based in South Uist. It would not be too difficult to extend our knowledge by some coastal recording in Harris and Lewis.

Distribution of *Petrobius* sp. records from OHBR database, 2km grid squares.

The position of St Kilda has been moved eastwards

Invertebrates: Other Phyla

It is interesting to note that not only is there a difference in the number of records of invertebrates (excluding insects) between 2024 and 2025 but also in the number of marine species. This is not unusual, as there is variation between years in the number of records, in the range of taxonomic groups and the habitat associations: marine, freshwater or terrestrial.

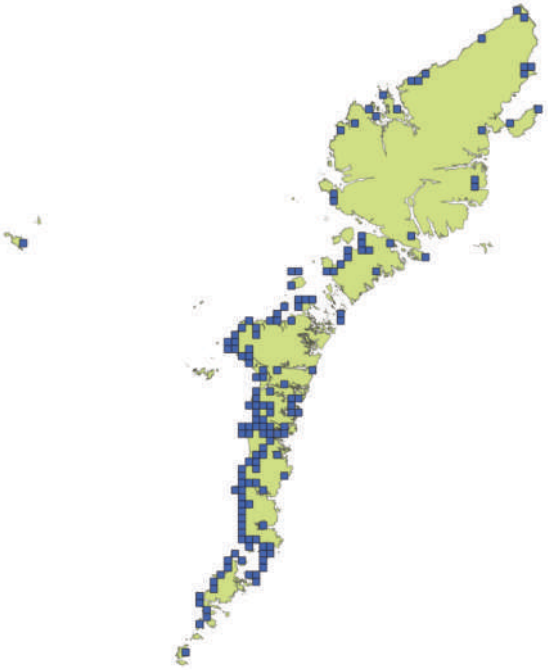
Phylum	Order		Records 2025	Species 2025	Records 2024	Species 2024
Annelida	Crassiclitellata	Earthworms			1	1
Arthropoda	Araneae	Spiders	12	8	14	10
	Collembola	Springtails	1	1		
	Decapoda	Crabs,crayfish, shrimps	1	1		1
	Geophilomorpha	Centipedes			1	
	Isopoda	Woodlice, slaters	2	2	3	2
	Ixodida	Ticks	1	1	1	1
	Julida	Millipedes	3	3	1	1
	Lepadiformes	Stalked barnacles	4	3		
	Lithobiomorpha	Stone centipedes	3	3		
	Opiliones	Harvestmen	4	4	19	3
	Polydesmida	Flat-backed millipedes			1	1
	Symphypleona	Globular springtails			1	1
	Trombidiformes	Mites	4	4	8	4
Chordata	Aplousobranchia	Sea squirts	1	1		
Cnidaria	Actiniaria	Sea anemones	12	7		
	Alcyonacea	Soft corals	2	2	1	1
	Anthoathecata	Marine hydrozoans	2	1		
	Rhizostomeae	Root-mouth jellyfish	4	1		
	Semaeostomeae	Flag-mouth jellyfish	14	4	2	2
	Siphonophorae	Colonial jellyfish	2	1		
	Stauromedusae	Stalked jellyfish	1	1		
Echinodermata	Camarodonta	Sea urchins	1	1		
	Forcipulatida	Globular sea urchins	4	2		
	Spinulosida	Starfish	1	1		
	Valvatida	Sea stars	2	1		
Mollusca	Caenogastropoda	Sea snails	13	1	1	1
	Anaspidea	Sea hares	1	1		
	Littorinimorpha	Aquatic snails	3	3		
	Neogastropoda	Aquatic snails	2	2		
	Nudibranchia	Sea slugs	2	2		
	Patellogastropoda	Limpets			1	1
	Pulmonata	Land snails and slugs	1	1	10	6
	Tectipleura	Aquatic molluscs	1	1	1	1
Nematoda	Rhabditida	Roundworms	1	1		
Platyhelminthes	Geoplanidae	Land flatworms	1	1		
Rotifera	Bdelloidea	Bdelloid rotifers			1	1
Tardigrada	Parachela	Tardigrades			1	1
		Total	**106**	**66**	**68**	**39**

There are 20 invertebrate phyla, 89 taxonomic orders and 401 species in the OHBR database. Apart from data supplied from visiting specialists, or local recorders taking an interest in a particular habitat or group of invertebrates, most of the records are derived from casual observations. This adds a random element to data collection and also adds a bias in terms of species which are easy to identify or particularly conspicuous.

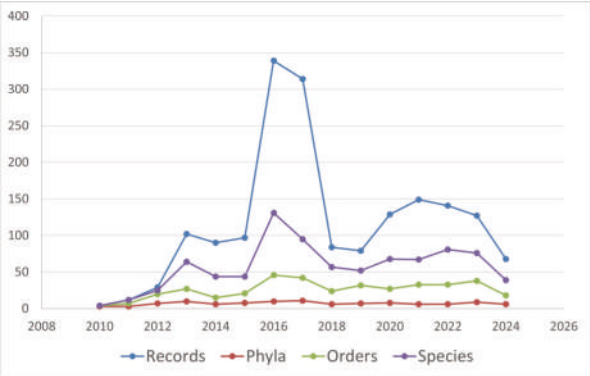
The distribution map of the records from 2010 to 2024, illustrates the extensive coverage of coastal habitats and the more restricted distribution of terrestrial species at inland sites. There are 16 species with more than 20 records in this time period, 15 are marine and represent almost 25% of the 1816 records collected in this period. Within this group there are 5 pelagic species, which in some years are washed up on the islands' shores in large numbers.

The data are complex and difficult to analyse because of the number of factors which influence the recording patterns. These vary from recorder activity and preferences, access to recording sites, changes in ocean currents and temperature to the requirement for different sampling techniques and the level of identification skills. It is also clear that the majority of the invertebrate taxa remain under-recorded.

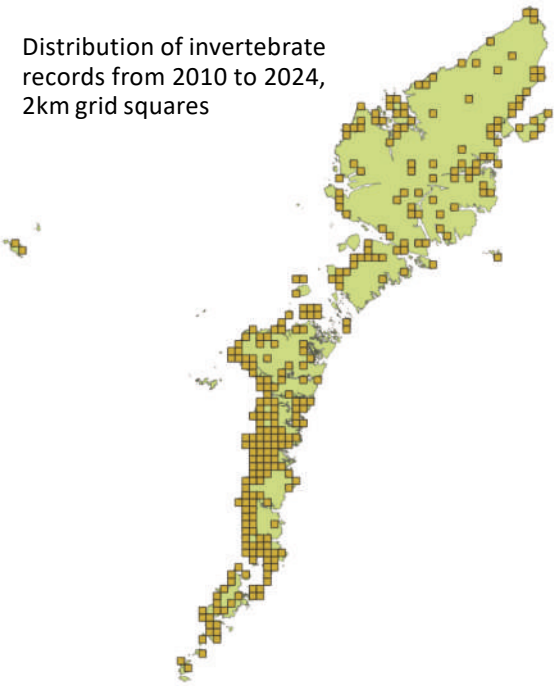
Distribution of marine invertebrate records from 2010 to 2024, 2km grid squares



Number and taxonomic composition of invertebrate records from 2010-2024.



Distribution of invertebrate records from 2010 to 2024, 2km grid squares



Thyme gall-mite (*Aceria thomasi*)
Photograph © Christine Johnson

The galls are formed in the buds and terminal leaves of wild thyme, with the mites living within the galls and the long silky hairs. This is one of the most commonly recorded invertebrate species in the OHBR database.

Terrestrial and Freshwater Invertebrates

In 2025, a third of all the records and 45% of the species were terrestrial species. The arachnids (spiders, harvestmen and gall-mites) were the most numerous, but they remain an under-recorded taxonomic group. They are not the most charismatic group and can be difficult to identify.

There were four species of plant gall mites, including *Eriophyes exilis,* which forms galls on the leaves of lime, and is a new species record for the islands. Centipedes and millipedes are less frequently recorded, but two new species: *Allajulus nitidus* and *Brachyiulus pusillus,* were added to the VC110 species list.

The records for 2025 included two species of freshwater snails, Jenkins' spire snail (*Potamopyrgus antipodarum*) and the wandering snail (*Ampullaceana balthica*). These are common and widespread throughout the islands and appear in the by-catch from when sampling freshwater pools and lochs for algae.

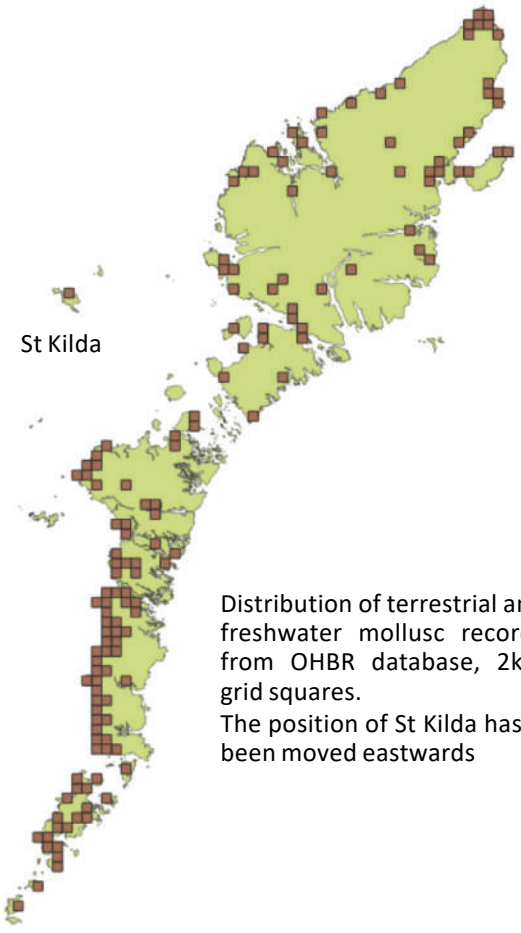
Jenkins' spire snail (*Potamopyrgus antipodarum*).
Photograph © Chris Johnson.

There are 1141 records of molluscs in the OHBR database just over half are terrestrial and freshwater species. There are 47 taxa, but there are only 15 species with more than 10 records. According to the dataset for the Conchological Society of Great Britain and Ireland, 103 taxa of terrestrial and freshwater molluscs have been recorded. As many of these are historical records, there is plenty of scope for local recorders to update the list.

Painted woodlouse (*Porcellio spinicornis*).
Photograph © Debbie Storrow.

There were two records of painted woodlice in 2025, one from Lewis and one from South Uist. This is the first time this species has been recorded since 1983.

Eleven species of terrestrial woodlice (Oniscidea) have been recorded, among these the common shiny and rough woodlice *Oniscus asellus* and *Porcellio scaber*) and the sea slater (*Ligia oceanica*) account for most of the records. *Ligia oceanica* is a coastal species and is considered to be more closely related to the marine isopods.



Distribution of terrestrial and freshwater mollusc records from OHBR database, 2km grid squares.
The position of St Kilda has been moved eastwards

Marine Invertebrates

With over 2000 km of coastline, the diverse topography and physical environment of the inshore waters has created a wide range of habitats, each with a characteristic community of animals and plants. The marine invertebrates recorded around our coasts comprise the resident species which live in the littoral (intertidal) zone, species which occupy the shallow inshore waters are periodically washed-up on our shores and pelagic species which travel on ocean currents and appear following storms or changes in the ocean's currents.

Pelagic ecosystems are sensitive to climate change and the effects on the biodiversity and ecology of individual species and communities are now becoming evident. It affects both species distribution and phenology which can be observed in changes in the diversity, numbers and timing of species which appear in our coastal waters and are stranded on our shores. Periodic recording of both the resident and pelagic species by local recorders, can contribute to the monitoring of the effect of climate on our marine biodiversity.

In 2025, 72 records of marine invertebrates from 26 species were collected. Just over half the records were from 10 pelagic species, which included two species, *Lepas hillii* and gulfweed crab (*Planes minutus*), not previously recorded in the Outer Hebrides. The common goose barnacle (*Lepas anatifera*) and *L. hilli* are pelagic stalked goose barnacles which breed in warm tropical and subtropical waters, and when attached to floating objects are carried northwards to cooler waters by ocean currents. *Lepas antifera* is the most common of the two species found on Hebridean beaches. The orange collar at the base of the capitulum (shell plates) is a distinguishing feature in *L. hillii*.

The gulfweed or Columbus crab (*Planes minutus*) is also a warm water pelagic species found off west coast of Africa, in the Mediterranean and western Indian Ocean. It occurs in the North Atlantic attached to floating objects carried northwards by ocean currents.

Common goose barnacle *(Lepas anatifera).*
Photograph © Joceline Hildrey.

Lepas hilli on a coconut found on Barra.
Photograph © Bruce Davies.

Bouy barnacles (*Dosima fascicularis*).
Photograph © Chris Johnson.

Buoy barnacles (*Dosima fascicularis*) are related to stalked goose barnacles and are carried along ocean current attached to the underside of floating objects. In some years large numbers are washed up on our beaches, but in 2025 there was only a single report. By-the-wind sailors (*Velella velella*) and Portuguese-man-of-war (*Physalia physalis*) are both part of the same pelagic community and were recorded in strandings from Vatersay in the south to Berneray in the north of the archipelago. Violet sea snails (*Janthina janthina*) are also pelagic and float on a raft of bubbles bound by mucus secreted from the foot. They prey on by-the-wind sailors, but are rarely found on our beaches. However, large numbers were reported in 2025 along the west coast from Barra and Vatersay to Harris

Information on the biodiversity and distribution of marine invertebrates has been relatively well documented by benthic and diver based marine surveys. However, information on the resident fauna of the islands' beaches and rock shores is mainly obtained from local recorders. Recording common species on a regular basis is one of the key roles of community biological recording groups.

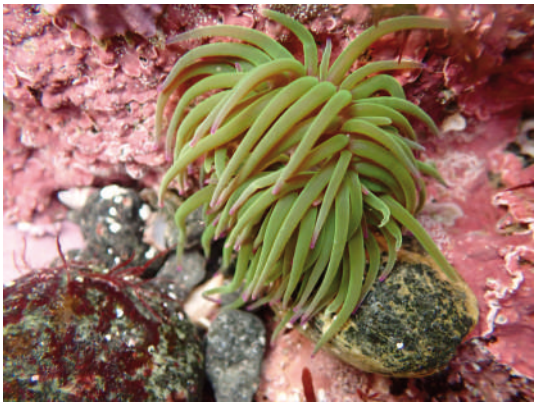
Whether beachcombing or rock pooling there is an enormous variety of species to record from seashells (marine molluscs) to jellyfish, crabs and starfish and sea anemones. As the tide ebbs, communities of marine invertebrates and seaweeds are revealed, each adapted to surviving at different depths and in changing environmental conditions.

Actiniaria: Sea Anemones

Species		Records
Actinia equina	Beadlet anemone	26
Urticina felina	Dahlia anemone	6
Aulactinia verrucosa	Gem anemone	4
Anemonia viridis	Snakelocks anemone	3
Cereus pedunculatus	Daisy anemone	2
Adamsia palliata	Cloak anemone	1
Cylista elegans	Elegant sea anemone	1
Metridium dianthus	Plumose anemone	1

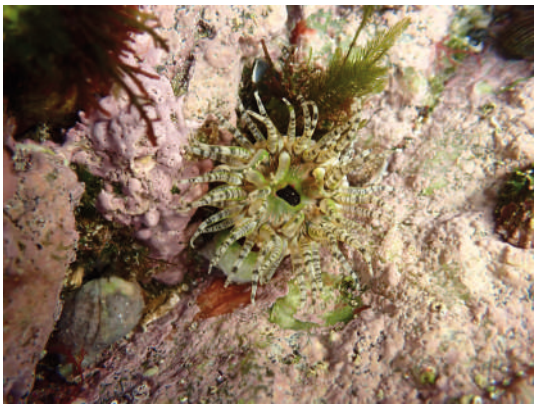
There are 3,553 records of sea anemones (Actiniaria) on the NBN Atlas which are almost entirely from statutory surveys. There are just 44 records on the OHBR database from 8 species.

Related to jellyfish and corals they have soft cylindrical bodies crowned with an oral disc with a ring of tentacles containing stinging cells.



Snakelocks anemone (*Anemonia viridis*).
Photograph © Kim Swift.

Daisy anemone (*Anemonia viridis*).
Photograph © Kim Swift.

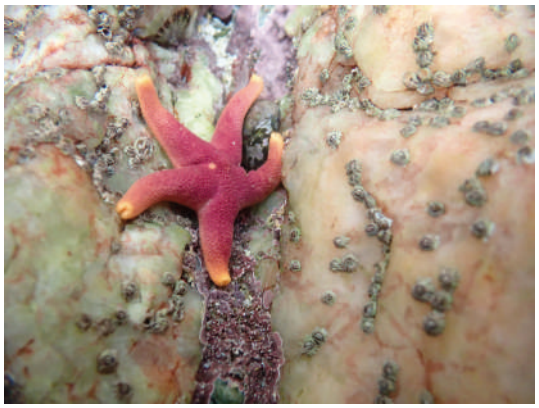


Gem anemone (*Aulactinia verrucosa*).
Photograph © Kim Swift.

Dahlia anemone (*Urticina felina*).
Photograph © Kim Swift.

Sea hare (*Aplysia punctata*).
A marine mollusc (Anaspidea) rather than a sea slug (Nudibranchia). There are 149 records on the NBN Atlas, mainly from benthic and diver based surveys. There are only two records from OHBR, so there is plenty of scope to add new records.
Photograph © Kim Swift.

Stalked jellyfish (*Calvadosia campanulata*).
Photograph © Kim Swift.



Henricia species.
Photograph © Kim Swift.

Local surveys can identify new species which are less likely to be found by benthic or offshore diver based surveys. In 2023 a stalked jellyfish (*Depastrum cyathiforme*) was found in a rockpool off the South Uist coast. This species was only know from a illustration made in 1860 by the marine biologist Philip Henry Gosse. It was subsequently recorded around the British coast but no photographs exist, and as far as we were aware it had not been seen in UK waters since 1954. In 2025, another specimen was located at the same site, establishing the presence of a small local population.

Sometimes interesting discoveries can be made, but it is important to record common species, even the eggs of the common whelk.

Common whelk eggs (*Buccinum undatum*).
Photograph Christine Johnson.

Vertebrates: Fish, Amphibians, Reptiles & Mammals

The vertebrate fauna is relatively small and includes a number of introduced species. Some of these, such as mink, hedgehog and feral ferret, are designated as invasive non-native species (INNS) because of their deleterious effect on the native species. Other species, red deer, rabbit and brown rat, can also pose problems when their populations increase to a level where they have a negative environmental impact. Local recorders are encouraged to report sightings of INNS, to supplement the statutory recording efforts.

The majority of records are based on casual observation, although an interest in amphibians (common frog, toad and palmate newt) and slow-worms has been maintained since 2011. Surveys of marine mammals are organised by the Hebridean Whale and Dolphin Trust, although a small number of records are collected by OHBR. Vertebrate recording often requires specialist surveying techniques which is usually beyond the scope of community recording.

There was a small increase in the number of records collected in 2025, although marine mammals were missing from the list. Again there were no records of palmate newts, and it is possible that the two small introduced populations have not survived.

Slow-worm (*Anguis fragilis)*
Photograph © Helena May Crosland-Thomson

Order	Species		Records 2025
Actinopterygii	*Anguilla anguilla*	European eel	2
	Gasterosteus aculeatus	Three-spined stickleback	3
	Taurulus bubalis	Sea scorpion	1
	Balistes capriscus	Grey trigger-fish	1
Elasmobranchii	*Dipturus intermedia*	Flapper skate	2
	Leucoraja naevus	Cuckoo ray	1
Amphibia	*Rana temporaria*	Common frog	8
	Bufo bufo	Common toad	1
Reptilia	*Anguis fragilis*	Slow-worm	3
Mammalia	*Cervus elaphus*	Red deer	6
	Lutra lutra	Eurasian otter	3
	*Erinaceus europaeus**	West European hedgehog	14
	Sorex minutus	Pygmy shrew	8
	Lepus timidus	Mountain hare	3
	Oryctolagus cuniculus	European rabbit	3
	Apodemus sylvaticus	Wood mouse	1
	Microtus agrestis	Field vole	4
	Rattus norvegicus	Brown rat	3
		Total	61

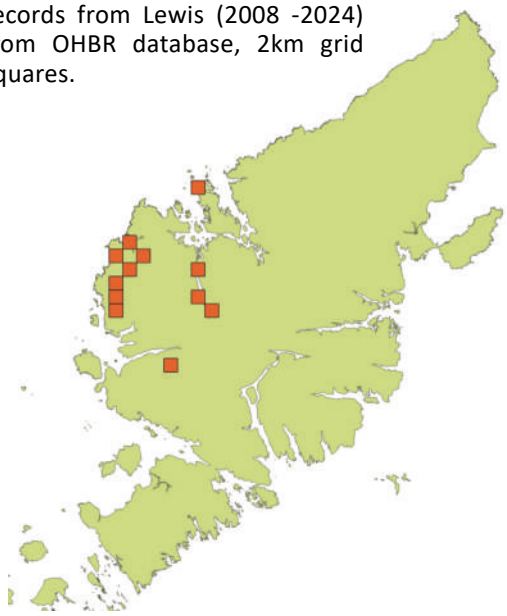
*The hedgehog is introduced and designated as Invasive Non-native Species (INNS).
Common frog and toad are also recent introductions but not classified as invasive and harmful to the environment.

Common toad (*Bufo bufo*)
Photograph © Marina Macleod

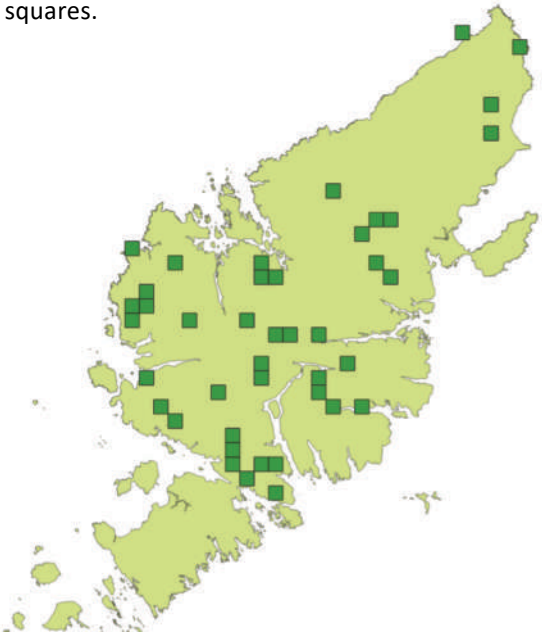
Amphibians are not native to the Outer Hebrides, and both the common frog (*Rana tempraria*) and the common toad (*Bufo bufo*) were introduced at about the same time in the 1960s or 1970s. Frogs are now common and widely distributed throughout the islands, however the population of toads is restricted to south west Lewis.

Toads are recorded in very small numbers each year, and only 18 records have been collected since 2008. It is difficult to ascertain whether this is because the population is small and widely dispersed or due to the small number of recorders visiting this area.

Distribution of common toad records from Lewis (2008 -2024) from OHBR database, 2km grid squares.



Distribution of mountain hare records from Harris and Lewis (1998-2025) from OHBR database, 2km grid squares.



Mountain hares (*Lepus timidus*) are native to the Scottish highlands and were introduced in to Harris and Lewis as a game species in the mid-19th century. This is not an easy species to survey because of the rugged nature and inaccessibility of the moorland habitat. However, in 2025, 21 records from 2009-2017 were submitted by the Hebridean Walking Club.

In remote rural areas, the observations of walkers, crofters, countryside wardens and gamekeepers are an important source of records of the fauna and flora. Some areas of the islands, particularly Harris and Lewis are difficult to access for the biological recording community and casual records from those who work in these areas are valued.

Just over 100 records of fungi and fungus-like organisms and a few common lichens were added in 2025, from 14 separate recorders, which is a good range, though they were identified by a smaller pool of determiners. Many were casual records of something curious which caught the recorder's eye - *Peziza ammophila* (dune cup) was an interesting one of those finds, only found at one site in Harris where it has been found every year since 2020 by the same local recorder.

The largest group of records came from systematic recording of rusts and smuts by a visiting naturalist, continuing a long-term study. There were some good records of microfungi from other sources too – another visitor recorded *Phaeosphaeria lycopodina* on dead leaves of *Huperzia selago* (fir clubmoss) and *Diphasiastrum alpinum* (alpine clubmoss) on Roineabhal, probably a species that could be searched for more widely, and a resident recorder found *Puccinia pulverulenta* on *Epilobium ciliatum* (American willowherb) – a rust that was only added to the VC110 list in 2024.

A species that is always nice to see (generally earlier in the year) is *Mitrula paludosa* (bog beacon), and this popped up in records from 2024 and 2025 added in the last year. It is an ascomycete fungus, bearing its spores embedded in the yellow head which has no gills, and grows on debris in flushes.

Bog beacon *(Mitrula paludosa).*
Photograph © Paul Smith.

This species is designated as uncommon. It is possible that, in common with many of the islands' fungi, it is under-recorded, with just 11 records in 14 years from seven locations.

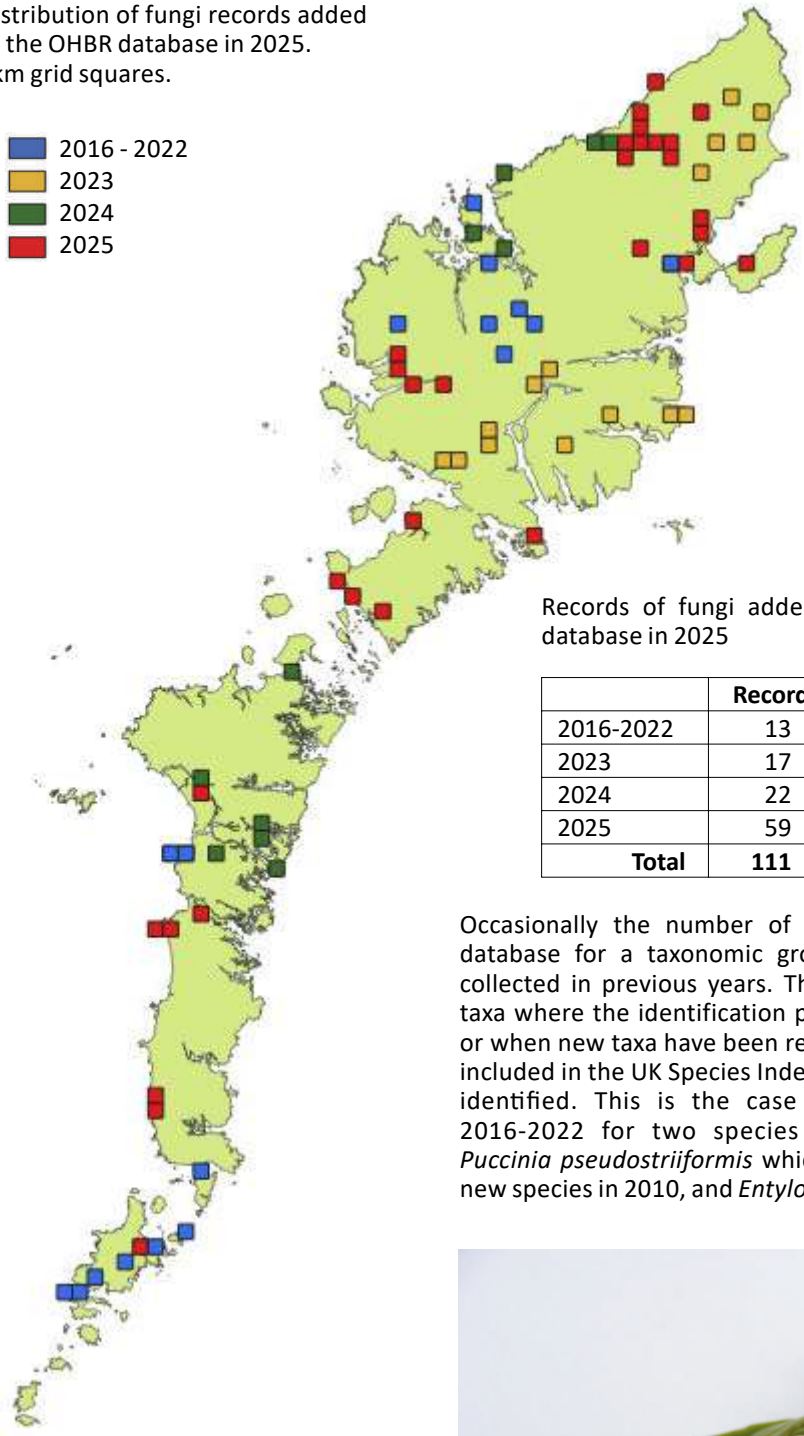
Dusky spindles (*Clavaria fumosa*).
Photograph © Chris Johnson.

A species associated with unimproved grassland. There are only five records in the OHBR database collected from South Uist and St Kilda between 2013 and 2025. This is a small species which is easy to overlook and may be under-recorded..

Brown rollrim (*Paxillus involutus*).
Photograph © Chris Johnson.

A large fungus associated with deciduous woodland. There are three records, one from South Uist and two from a single location in Lewis. This is a poisonous species.

Distribution of fungi records added to the OHBR database in 2025.
2km grid squares.



Records of fungi added to the OHBR database in 2025

	Records	Species
2016-2022	13	2
2023	17	6
2024	22	10
2025	59	43
Total	**111**	**61**

Occasionally the number of records added to the database for a taxonomic group will include some collected in previous years. This is more common in taxa where the identification process can be complex or when new taxa have been recorded which were not included in the UK Species Index when the species was identified. This is the case in the records from 2016-2022 for two species of plant pathogens: *Puccinia pseudostriiformis* which was recognised as a new species in 2010, and *Entyloma ranunculi-scleratı*.

Puccinia extensicola on sea aster (*Aster tripolium*). Recorded at two sites in North Uist in August 2010. Photograph © Paul Smith.

Bryophytes: Mosses and Liverworts

447 bryophyte records were added to the OHBR database in 2025, though most of those were actually made in 2024, with a few casual records from 2023 and 2025. The bryophyte recorder for VC110 has (unfortunately for us) moved away from the islands, so the position is now vacant. There is one substantial list from the VC recorder among the records, but otherwise they have all resulted from the activities of a non-expert visitor collecting batches of specimens from interesting-looking habitats and sending them off for determination. This has resulted in records from some out-of-the way parts of the islands.

The past VC recorder, in making the determinations, commented that the most interesting sample was from a gully in Creag Dhubh Dhiobadail (NB0423), with some lovely liverworts, including *Bazzania pearsonii* (arch-leaved whipwort), *Bazzania tricrenata* (lesser whipwort), *Plagiochila carringtonii* (Carrington's featherwort), and luxurious *Mastigophora woodsii* (Wood's whipwort).

The batch of records also includes several from Barra, Vatersay and neighbouring islands, which are substantially less well-recorded for bryophytes. Interesting species here included *Philonotis calcarea* (thick-nerved apple-moss) and *Trichostomum littorale* (coastal crisp-moss), which has been recently split from *Trichostomum brachydontium* (variable crisp-moss), both on Vatersay.

Obe River Gorge, Barra.
Location of one of the a bryophyte collections made on Barra in May 2024.
Photograph © Paul Smith.

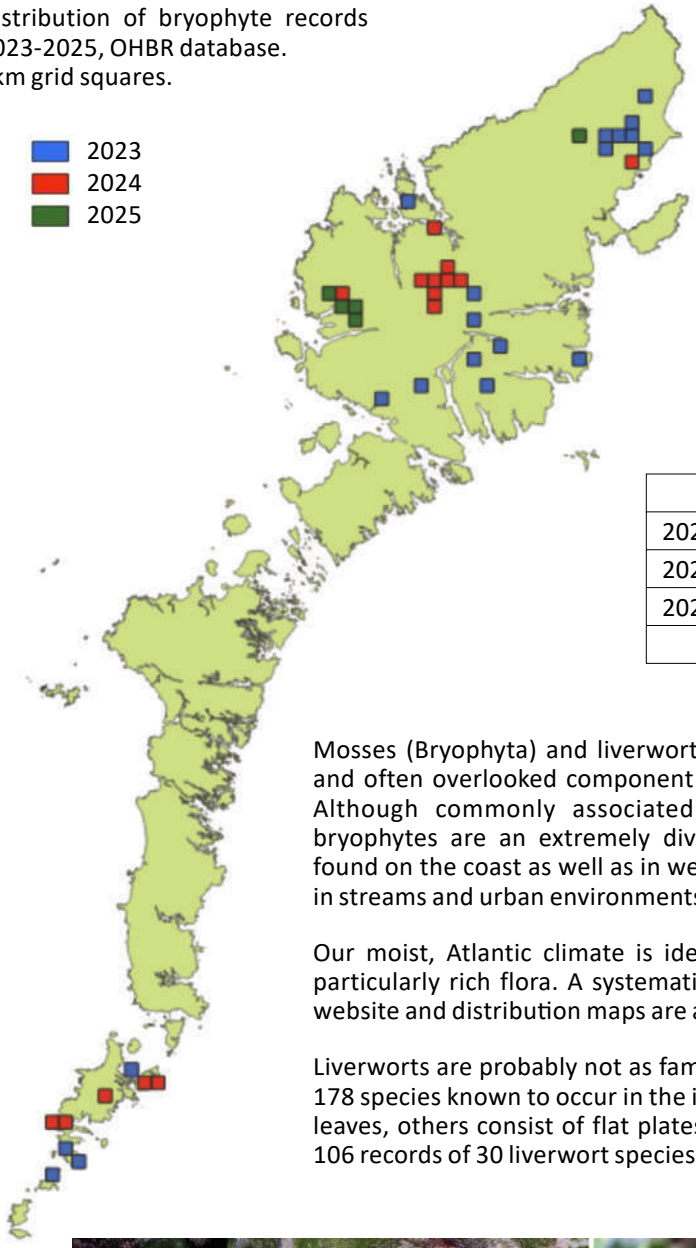
Long-shanked pincushion (*Ptychomitrium polyphyllum*).
Photograph © Chris Johnson.

A common component of maritime bryophyte communities. Recorded in 2024 on cliffs at Àirigh a' Bhealaich, Lewis.

Slender mouse-tail moss (*Isothecium myosuroides*).
Photograph © Chris Johnson.

Widely distributed throughout the islands. In May 2024 it was recorded at two sites on Barra, including the Obe River gorge, one on Lewis and on the island of Fuidheigh .

Distribution of bryophyte records 2023-2025, OHBR database.
2km grid squares.



Bryophyte records 2023 -2025

	Records	Tetrads	Species
2023	142	21	81
2024	426	19	105
2025	6	6	2
Total	**574**	**46**	**188**

Mosses (Bryophyta) and liverworts (Marchantiophyta) are an important and often overlooked component of terrestrial and aquatic ecosystems. Although commonly associated with moist and shady conditions, bryophytes are an extremely diverse taxonomic groups which can be found on the coast as well as in wetlands, in woodlands and on bare rock, in streams and urban environments.

Our moist, Atlantic climate is ideal for bryophytes and Scotland has a particularly rich flora. A systematic checklist can be found on the OHBR website and distribution maps are available on the NBN Atlas website.

Liverworts are probably not as familiar as mosses, but there are currently 178 species known to occur in the islands. Some species have thin delicate leaves, others consist of flat plates of tissue forming a thallus. In 2024, t 106 records of 30 liverwort species were collected.

Pellia epiphylla, showing the thallus, and the emergence of the sporophyte.
Photograph © Chris Johnson.

Pellia epiphylla is a thallose liverwort found on acidic or neutral substrates in wet woodland and wetlands, and just above the water level on the sides of streams and ditches. It can only be reliably distinguished from the two other *Pellia* species when the reproductive structures are present.

Vascular plants

OHBR has always had a close relationship with the BSBI vice-county recorder and as part of a data-sharing agreement the OHBR botanical data is managed by the BSBI. The latest maps can be viewed at https://database.bsbi.org/maps/.

OHBR added 135 records of vascular plants from 17 recorders, among which were interesting records of *Samolus valerandi* (brookweed) from Loch Scolpaig, North Uist and *Botrychium lunaria* (moonwort) from Seilebost, South Harris.

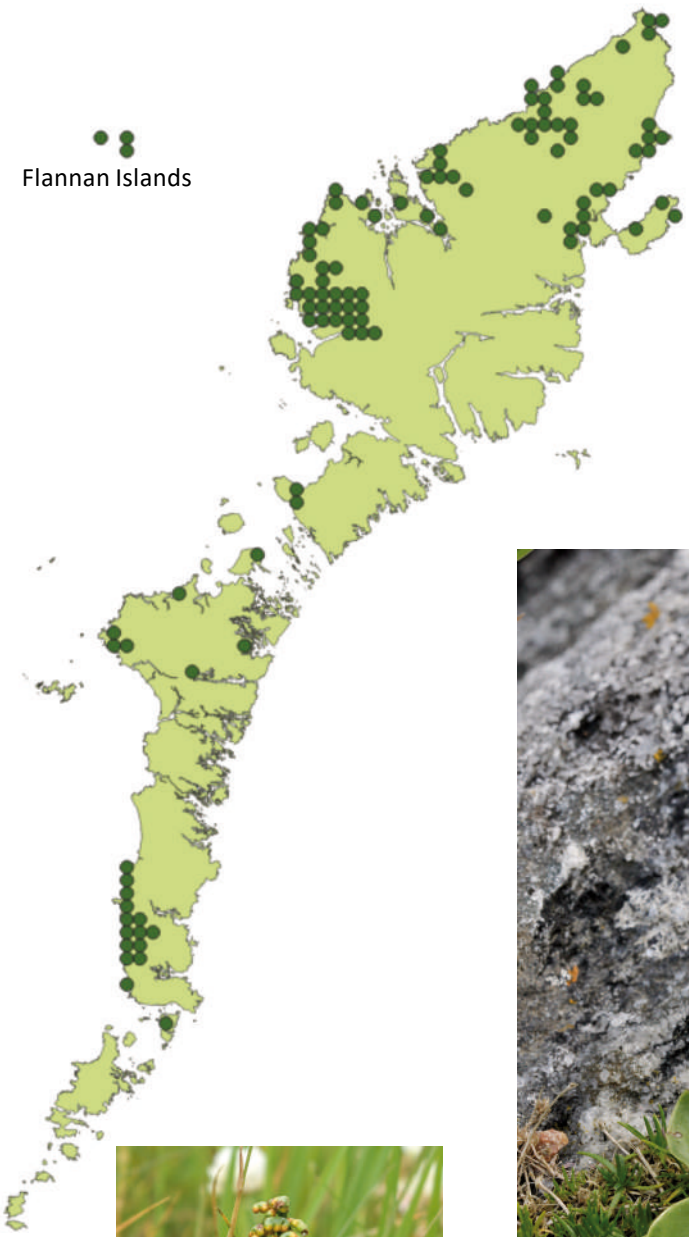
Meanwhile BSBI recorders (including several groups of specialist botanists visiting the islands) managed 5873 records in 2025. Particularly valuable in systematic recording was a trip by a team of botanists led by the botanical recorder to the Hamanavay area of south-west Lewis, which produced species lists for a cluster of tetrads, many with no previous records. Among them were several interesting species – star of the show was *Rhynchospora fusca* (brown beak-sedge), a rare native species in Scotland which has not previously been recorded in the Outer Hebrides, and there were also good records for *Hammarbya paludosa* (bog orchid). Several species were recorded new for their hectads, largely owing to slightly richer and anthropic habitats near habitation, in contrast to the surrounding acidic hills and moor. Further systematic recording around Barvas also added many records in tetrads that had previously been at most sparsely recorded. Here *Catabrosa aquatica* (whorl-grass) was found in an unusual habitat in a large flush next to a loch well out on the moor.

A visitor to the Flannan Isles added a small number of species, from some tetrads that are very hard to reach.

In the spring a targeted visit programme refound many old records of *Hierochloe odorata* (holy grass) round Loch Hallan and found it in a completely new location at Loch Eilean an Staoir. The distribution of *Cicuta virosa* (cowbane) around both lochs was also mapped – the plants at Loch Eilean an Staoir had not been recorded since 1894.

Holy grass (*Hierochloe odorata*).
Photograph © Paul Smith.

Brown beak-sedge (*Rhynchospora fusca*).
Photograph © Jim McIntosh.



Distribution of records of vascular plants collected in 2025 by visiting botanists, 2km grid squares

Brookweed (*Samolus verlandi*).
Photograph © Christine Johnson.

Recorded at Loch Scolpaig in July 2025. Previously recorded at the same location in August 2019.

Moonwort (*Botrychium lunaria*).
Photograph © Bill Neill.

A small perennial fern, recorded at Seilebost, South Harris in June 2025.

Algae, Photosynthetic Bacteria, Chromista and Protozoa

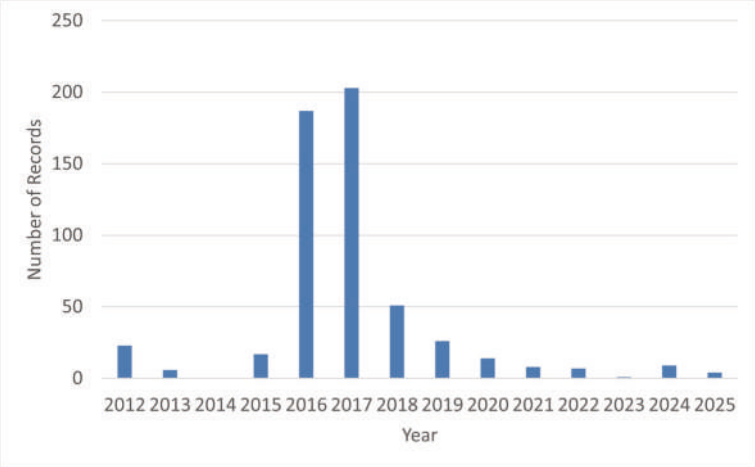
The Outer Hebrides survey of freshwater algae has been in operation since 2017, concentrating on a group of single celled green algae commonly known as desmids. Other algal taxa, and allied group such as diatoms, cyanobacteria and euglenoid protozoa are recorded from the by-catch when time permits. As the focus of recording has moved to freshwater habitats, the number of records of marine algae (Chlorophyta, Ochrophyta and Rhodophyta species) has declined.

Summary of records 2025

	Phylum		Records	Taxa
Plants	Charophyta	Desmids	671	300
	Rhodophyta	Red algae	2	2
Bacteria	Cyanobacteria	Blue-green bacteria	1	1
Chromista	Ochrophyta	Brown algae	2	2
		Total	**676**	**305**

Marine Algae

Number of records of marine algae in the OHBR database, 2012 -2025



Ulothrix flacca.
Filamentous green alga growing on the shell of a common cockle.
Photograph © Chris Johnson.

The Outer Hebrides is recognised as an important area for seaweeds in the UK. Since the comprehensive survey of islands' seaweeds in 2012, information of the distribution and abundance of marine algae has been collected from benthic studies and a series of surveys of the biodiversity of rocky inter-tidal seashores for the Marine Biodiversity and Climate Change programme.

Apart from a small project to record the coastal species in 2016 and 2017, the OHBR recorders have not taken an interest in seaweeds. From 2021 the number of records has decreased to less the 10 per annum. This is surprising as large sections of the coast are accessible and offer a wide range of habitats. As a taxonomic group marine algae are very diverse and many species can be identified from a field guide.

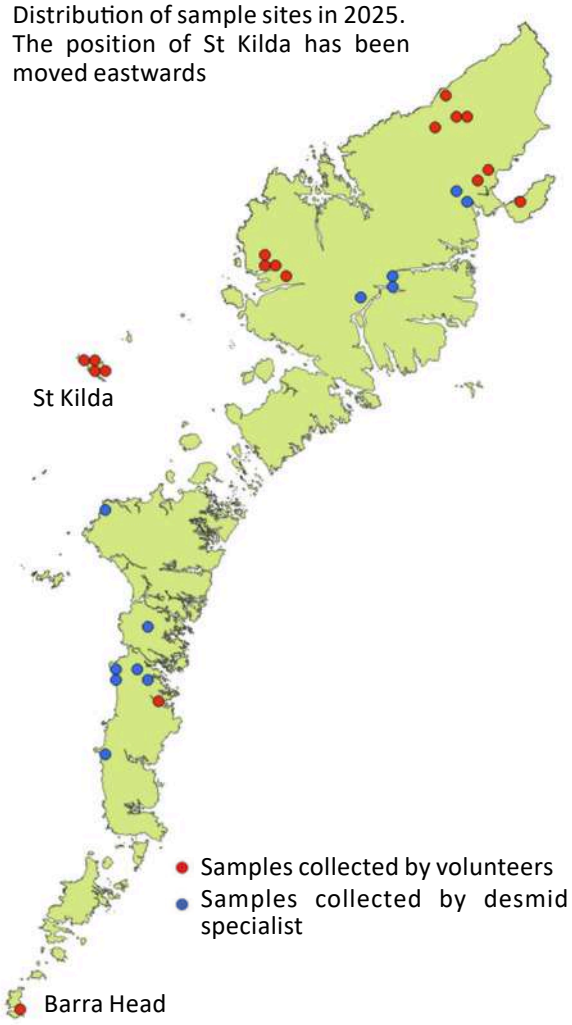
Brown, green and red marine algae
in a coastal rockpool.
Photograph © Chris Johnson.

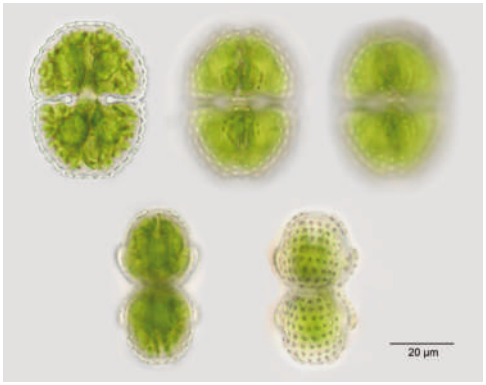
Freshwater Algae: Desmids

In the last nine years, samples have been collected from 348 sites covering a diverse range of habitats from large lochs on the machair and moorland to ephemeral winter pools, flooded peat cuttings, *Sphagnum* bogs and moss growing in seepages and on wet rock faces. In 2025, visiting recorders volunteered to collect samples from St Kilda and some inaccessible locations in Lewis, and two local recorders obtain a sample from Barra Head at the southern end of the archipelago. This provided an opportunity for the local desmid specialist to concentrate on making repeat visits to some key sites in Lewis, North and South Uist. Overall this change in strategy resulted in a decrease in the number of records, although this was compensated by the discovery of some interesting new species and and an expansion of the geographical range of the survey.

In June 2025 the long awaited work revising the taxonomy of the genus *Cosmarium*, the largest of the desmid genera, finally arrived. This comprehensive treatise required a review of all the *Cosmarium* records in our database to determine their status with respect to the new nomenclature. This resulted in some radical changes to our species list and distribution maps, as species names were changed, varieties were sometimes elevated to a new species level or downgraded to the nominate species, whilst other species were split into varieties and new species. As yet we have not assessed the effect on the biogeography of this taxon in the islands, which will require some repeat sampling to try to resolve the status of a number of species.

Distribution of sample sites in 2025. The position of St Kilda has been moved eastwards





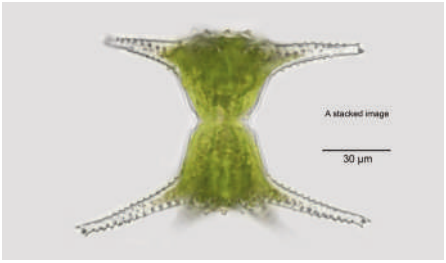
Cosmarium druimnahimrichense.
Photo-micrograph © Chris Johnson.

By Loch Druim na h-Imrich, South Uist
Photograph © Christine Johnson

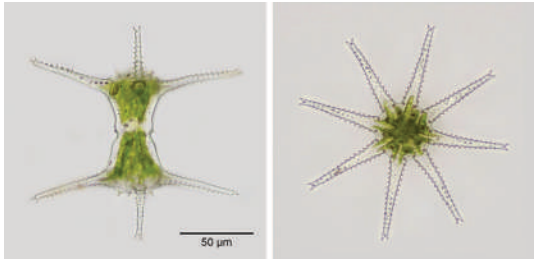
The Outer Hebrides Freshwater Algae survey has added a substantial number of new species to the Outer Hebrides and British taxonomic lists of desmids. However, it was not anticipated that this work would also describe three new species of *Cosmarium* between 2023 and 2024. These are all included in the new *European Flora of the Desmid Genus Cosmarium* (Kouwets 2025), however the description of a fourth species *Cosmarium druimnahimrichense,* was published too late to be included. It was discovered in a sample from a pool by Loch Druim na-h-Imrich in March 2025, and a full description is available on the Outer Hebrides Algae website.

Loch Beag, off the road to Eisgein, Lewis. Photograph © Christine Johnson.

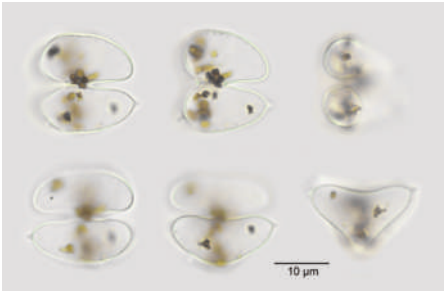
Each year new locations of various habitat types are added to the survey to increase the geographical and topographical range of the study. In addition Sites which are identified as "interesting" either for the diversity or species richness of the desmid flora, or to try to obtain further samples of particularly rare or unusual species. Loch Beag is included in this list because of its particular high species diversity (94 taxa) and the presence of *Staurastrum verticillatum* which has only been found at this location. This site was first sampled in 2022 and again in 2023 and 2025. *S. verticillatum* was found on each occasion, and in 2025 a second similar species *S. ophira* was collected.



Staurastrum ophira.
Atlantic distribution from Scandinavia to Ireland and across to north America.
Photo-micrograph © Chris Johnson.



Staurastrum verticillatum.
Atlantic distribution only known with certainty from Scotland and Ireland.
Photo-micrograph © Chris Johnson.



Staurastrum lanceolatum var. *compressum.*
Probably an Atlantic-Arctic distribution. Not a particularly rare species, but to date only collected from Loch Beag
Photo-micrograph © Chris Johnson.

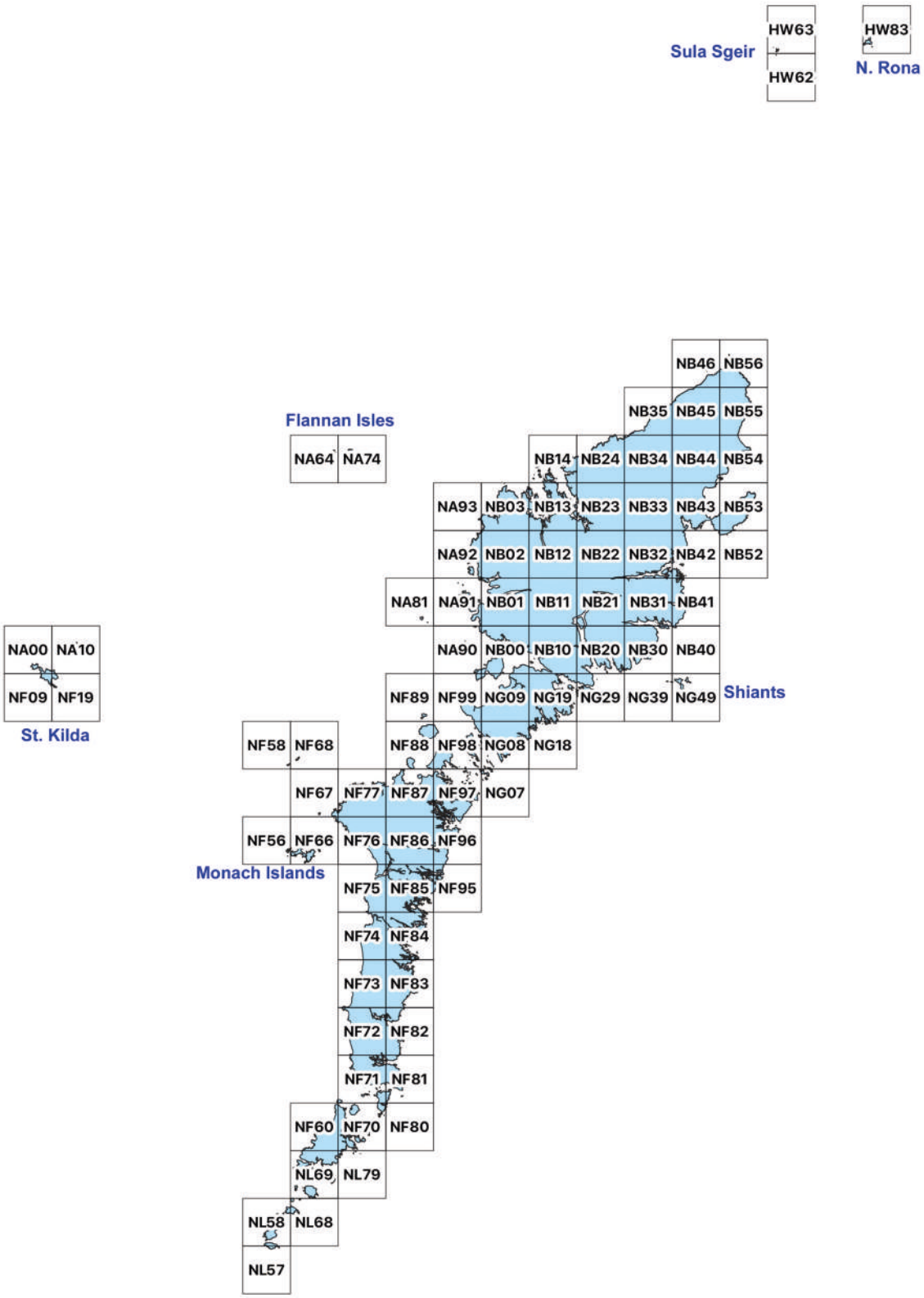
Two other interesting *Staurastrum* species with similar biogeographic characteristics: *S. anatium* and *S. arachne* have also been collected from Loch Beag.

S. anatium is a widespread species which is only common in North Wales, the west of Ireland and north-west Scotland. So far it has been found at four sites in South Uist and one site in Lewis, in addition to Loch Beag.

S. arachne is a common species but more frequent in the north and west of the British Isles,, particularly in Sutherland and the Outer Hebrides. It has been recorded at 19 sites in Lewis (including Loch Beag), Harris and from North to South Uist.

VC110 10km grid squares

VC110 - hectad (10km square) coverage of the Outer Hebrides



Life on the rocky shore from anemones to seaweeds

Working Together

To help to sustain and enhance the biodiversity of the Outer Hebrides to enrich the lives of local communities and future generations

To increase our knowledge of the wildlife: flora, fauna and fungi, of our islands and make this information available to everyone

To encourage everyone to take an interest in the natural world and provide opportunities to participate in biological recording